

533, 416

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043361 A2

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- (22) International Filing Date: 6 November 2003 (06.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/425,235 8 November 2002 (08.11.2002) US
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS AND METHODS FOR THE TREATMENT OF NATURAL KILLER CELL RELATED DISEASES

(57) Abstract: The present invention relates to compositions containing novel proteins and methods of using those compositions for the diagnosis and treatment of immune related diseases.

WO 2004/043361 A2

COMPOSITIONS AND METHODS FOR THE TREATMENT OF NATURAL KILLER CELL RELATED DISEASES

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Field of the Invention

The present invention relates to compositions and methods useful for the diagnosis and treatment of immune related diseases.

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Background of the Invention

Immune related and inflammatory diseases are the manifestation or consequence of fairly complex, often multiple interconnected biological pathways which in normal physiology are critical to respond to insult or injury, initiate repair from insult or injury, and mount innate and acquired defense against foreign organisms. Disease or pathology occurs when these normal physiological pathways cause additional insult or injury either as directly related to the intensity of the response, as a consequence of abnormal regulation or excessive stimulation, as a reaction to self, or as a combination of these.

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Though the genesis of these diseases often involves multistep pathways and often multiple different biological systems/pathways, intervention at critical points in one or more of these pathways can have an ameliorative or therapeutic effect. Therapeutic intervention can occur by either antagonism of a detrimental process/pathway or stimulation of a beneficial process/pathway.

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Many immune related diseases are known and have been extensively studied. Such diseases include immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

Immune related diseases could be treated by suppressing the immune response. Using neutralizing antibodies that inhibit molecules having immune stimulatory activity would be beneficial in the treatment of immune-mediated and inflammatory diseases. Molecules which inhibit the immune response can be utilized (proteins directly or via the use of antibody agonists) to inhibit the immune response and thus ameliorate immune related disease.

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Natural killer (NK) cells are an important effector cell of the innate immune system. They are specialized to effect killing against host cells that have either been infected by viruses, parasites or that have become cancerous. Phenotypically, NK cells are large granular lymphocytes that constitute ~2 % of the circulating lymphocyte population. They are commonly identified by cell surface expression of CD56 and CD16. NK cells mature in the bone marrow from a CD34+ precursor cell that they share with T cells. The mature NK cell, shares expression of CD8, cytolytic machinery, and some KIRs, with T cells, but remains distinct from T cells by the lack of CD3 and the T cell receptors. Like cytotoxic T cells, they contain granules filled with pore forming protein, cytotoxins, serine esterases and proteoglycans that mediate lysis of target cells. Both cytotoxic T cells and NK cells kill on contact by binding to their targets and delivering their lethal burst of chemicals that produces holes in the target cell's membrane. Unlike cytotoxic T cells, NK cells do not need to recognize a specific antigen before initiating lysis. Rather, NK cell activation can be mediated by growth factors and cytokines such as, IL-2, IL-12 and IL-15 have been shown to mediate

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proliferative and cytotoxic activities or by a delicate balance between two classes of NK cell receptors, one that activates the cells, and another that inhibits. Killer Ig-like receptors (KIRs) are NK cell receptors that transmit an inhibitory signal if they encounter class I MHC molecules on a cell surface. This is important for killing of both cancerous cells and virally infected cells. Because viruses often suppress class I MHC expression in cells they infect, the virus-infected cell becomes susceptible to killing by NK cells. Likewise, cancer cells have reduced or no class I MHC expression also become susceptible to killing by NK cells. Natural cytotoxicity receptors (NCRs) constitute a family of activating receptors on NK cells. In some effector-target systems, the surface density of NCRs correlates with the cytolytic activity of the NK cells, while in other systems killing requires cooperation between NCR, another activating receptor NKG2D and its adaptor polypeptide DAP10. Additionally, the strength of the stimulatory signals can be influenced by engagement of co-receptors such as 2B4 and NTB-A. The ligands for NCRs and NKG2D, hemoglutinins and MICA, MICB respectively are not expressed by most normal cells, but are induced in most tumor cell lines. Expression of the ligands by tumor cells triggers a dramatic immune response resulting in tumor cell rejection.

Activation of NK cells with IL-15 or IL-12 have been shown to induce both cytotoxic and proliferative effects. Junctional adhesion molecule 2 (JAM2) has been shown to bind to NK cells and has been hypothesized to play a role in lymphocyte extravasation to sites of inflammation. Therefore, a DNA microarray experiment comparing differential expression of genes from these three modes of activation versus resting NK cells has the potential to reveal novel genes or novel gene associations with NK cell activity. Therapeutic antibodies, peptides or small molecules could be developed to target specific genes revealed by these microarrays for the treatment of immune mediated inflammatory diseases and malignancies.

Despite the above research in NK cells, there is a great need for additional diagnostic and therapeutic agents capable of detecting the presence of NK cell mediated disorders in a mammal and for effectively reducing these disorders. Accordingly, it is an objective of the present invention to identify polypeptides that are differentially expressed in activated NK cells as compared to resting NK cells, and to use those polypeptides, and their encoding nucleic acids, to produce compositions of matter useful in the therapeutic treatment and diagnostic detection of NK cell mediated disorders in mammals.

Summary of the Invention

A. Embodiments

The present invention concerns compositions and methods useful for the diagnosis and treatment of immune related disease in mammals, including humans. The present invention is based on the identification of proteins (including agonist and antagonist antibodies) which are a result of stimulation of the immune response in mammals. Immune related diseases can be treated by suppressing or enhancing the immune response. Molecules that enhance the immune response stimulate or potentiate the immune response to an antigen. Molecules which stimulate the immune response can be used therapeutically where enhancement of the immune response would be beneficial. Alternatively, molecules that suppress the immune response attenuate or reduce the immune response to an antigen (*e.g.*, neutralizing antibodies) can be used therapeutically where attenuation of the immune response would be beneficial (*e.g.*, inflammation).

Accordingly, the PRO polypeptides, agonists and antagonists thereof are also useful to prepare medicines and medicaments for the treatment of immune-related and inflammatory diseases. In a specific aspect, such medicines and medicaments comprise a therapeutically effective amount of a PRO polypeptide, agonist or antagonist thereof with a pharmaceutically acceptable carrier. Preferably, the admixture is sterile.

5 In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprises contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a native sequence PRO polypeptide. In a specific aspect, the PRO agonist or antagonist is an anti-PRO antibody.

10 In another embodiment, the invention concerns a composition of matter comprising a PRO polypeptide or an agonist or antagonist antibody which binds the polypeptide in admixture with a carrier or excipient. In one aspect, the composition comprises a therapeutically effective amount of the polypeptide or antibody. In another aspect, when the composition comprises an immune stimulating molecule, the composition is useful for: (a) increasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) stimulating or enhancing an immune response in a mammal in need thereof, (c) increasing the proliferation of NK cells in a mammal in need thereof in response to an antigen, (d) stimulating the activity of NK cells or (e) increasing the vascular permeability. In a further aspect, when the composition comprises an immune inhibiting molecule, the composition is useful for: (a) decreasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) inhibiting or reducing an immune response in a mammal in need thereof, (c) decreasing the activity of NK cells or (d) decreasing the proliferation of NK cells in a mammal in need thereof in response to an antigen. In another aspect, the composition comprises a further active ingredient, which may, for example, be a further antibody or a cytotoxic or chemotherapeutic agent. Preferably, the composition is sterile.

25 In another embodiment, the invention concerns a method of treating an immune related disorder in a mammal in need thereof, comprising administering to the mammal an effective amount of a PRO polypeptide, an agonist thereof, or an antagonist thereto. In a preferred aspect, the immune related disorder is selected from the group consisting of: systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious, autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody. In one aspect, the present invention concerns an isolated antibody which binds a PRO polypeptide. In another aspect, the antibody mimics the activity of a PRO polypeptide (an agonist antibody) or conversely the antibody inhibits or neutralizes the activity of a PRO polypeptide (an antagonist antibody). In another aspect, the antibody is a monoclonal antibody, which preferably has nonhuman complementarity determining region (CDR) residues and human framework region (FR) residues. The antibody may be labeled and may be immobilized on a solid support. In a further aspect, the antibody is an antibody fragment, a monoclonal antibody, a single-chain antibody, or an anti-idiotypic antibody.

In yet another embodiment, the present invention provides a composition comprising an anti-PRO antibody in admixture with a pharmaceutically acceptable carrier. In one aspect, the composition comprises a therapeutically effective amount of the antibody. Preferably, the composition is sterile. The composition may be administered in the form of a liquid pharmaceutical formulation, which may be preserved to achieve extended storage stability. Alternatively, the antibody is a monoclonal antibody, an antibody fragment, a humanized antibody, or a single-chain antibody.

In a further embodiment, the invention concerns an article of manufacture, comprising:

- (a) a composition of matter comprising a PRO polypeptide or agonist or antagonist thereof;
- (b) a container containing said composition; and
- (c) a label affixed to said container, or a package insert included in said container referring to the use of said PRO polypeptide or agonist or antagonist thereof in the treatment of an immune related disease. The composition may comprise a therapeutically effective amount of the PRO polypeptide or the agonist or antagonist thereof.

In yet another embodiment, the present invention concerns a method of diagnosing an immune related disease in a mammal, comprising detecting the level of expression of a gene encoding a PRO polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower expression level in the test sample as compared to the control sample indicates the presence of immune related disease in the mammal from which the test tissue cells were obtained.

In another embodiment, the present invention concerns a method of diagnosing an immune disease in a mammal, comprising (a) contacting an anti-PRO antibody with a test sample of tissue cells obtained from the mammal, and (b) detecting the formation of a complex between the antibody and a PRO polypeptide, in the test sample; wherein the formation of said complex is indicative of the presence or absence of said disease. The detection may be qualitative or quantitative, and may be performed in comparison with monitoring the complex formation in a control sample of known normal tissue cells of the same cell type. A larger quantity of complexes formed in the test sample indicates the presence or absence of an immune disease in the mammal from which the test tissue cells were obtained. The antibody preferably carries a detectable label. Complex formation can be monitored, for example, by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. The test sample is usually obtained from an individual suspected of having a deficiency or abnormality of the immune system.

In another embodiment, the invention provides a method for determining the presence of a PRO polypeptide in a sample comprising exposing a test sample of cells suspected of containing the PRO polypeptide to an anti-PRO antibody and determining the binding of said antibody to said cell sample. In a specific aspect, the sample comprises a cell suspected of containing the PRO polypeptide and the antibody binds to the cell. The antibody is preferably detectably labeled and/or bound to a solid support.

In another embodiment, the present invention concerns an immune-related disease diagnostic kit, comprising an anti-PRO antibody and a carrier in suitable packaging. The kit preferably contains instructions for using the antibody to detect the presence of the PRO polypeptide. Preferably the carrier is pharmaceutically acceptable.

In another embodiment, the present invention concerns a diagnostic kit, containing an anti-PRO antibody in suitable packaging. The kit preferably contains instructions for using the antibody to detect the PRO polypeptide.

In another embodiment, the invention provides a method of diagnosing an immune-related disease in a mammal which comprises detecting the presence or absence of a PRO polypeptide in a test sample of tissue cells obtained from said mammal, wherein the presence or absence of the PRO polypeptide in said test sample is indicative of the presence of an immune-related disease in said mammal.

In another embodiment, the present invention concerns a method for identifying an agonist of a PRO polypeptide comprising:

(a) contacting cells and a test compound to be screened under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective agonist, wherein the induction of said cellular response is indicative of said test compound being an effective agonist.

In another embodiment, the invention concerns a method for identifying a compound capable of inhibiting the activity of a PRO polypeptide comprising contacting a candidate compound with a PRO polypeptide under conditions and for a time sufficient to allow these two components to interact and determining whether the activity of the PRO polypeptide is inhibited. In a specific aspect, either the candidate compound or the PRO polypeptide is immobilized on a solid support. In another aspect, the non-immobilized component carries a detectable label. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened in the presence of a PRO polypeptide under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective antagonist.

In another embodiment, the invention provides a method for identifying a compound that inhibits the expression of a PRO polypeptide in cells that normally express the polypeptide, wherein the method comprises contacting the cells with a test compound and determining whether the expression of the PRO polypeptide is inhibited. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened under conditions suitable for allowing expression of the PRO polypeptide; and

(b) determining the inhibition of expression of said polypeptide.

In yet another embodiment, the present invention concerns a method for treating an immune-related disorder in a mammal that suffers therefrom comprising administering to the mammal a nucleic acid molecule that codes for either (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide or (c) an antagonist of a PRO polypeptide, wherein said agonist or antagonist may be an anti-PRO antibody. In a preferred embodiment, the mammal is human. In another preferred embodiment, the nucleic acid is administered via *ex vivo* gene therapy. In a further preferred embodiment, the nucleic acid is comprised within a vector, more preferably an adenoviral, adeno-associated viral, lentiviral or retroviral vector.

In yet another aspect, the invention provides a recombinant viral particle comprising a viral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide, or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein the viral vector is in association with viral structural proteins. Preferably, the signal sequence is from a mammal, such as from a native PRO polypeptide.

In a still further embodiment, the invention concerns an *ex vivo* producer cell comprising a nucleic acid construct that expresses retroviral structural proteins and also comprises a retroviral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein said producer cell packages the retroviral vector in association with the structural proteins to produce recombinant retroviral particles.

In a still further embodiment, the invention provides a method of increasing the activity of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of NK cells in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the activity of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of NK cells in the mammal is decreased.

In a still further embodiment, the invention provides a method of increasing the proliferation of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of NK cells in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the proliferation of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of NK cells in the mammal is decreased.

B. Additional Embodiments

In other embodiments of the present invention, the invention provides vectors comprising DNA encoding any of the herein described polypeptides. Host cell comprising any such vector are also provided. By way of example, the host cells may be CHO cells, *E. coli*, or yeast. A process for producing any of the herein described polypeptides is further provided and comprises culturing host cells under conditions

suitable for expression of the desired polypeptide and recovering the desired polypeptide from the cell culture.

In other embodiments, the invention provides chimeric molecules comprising any of the herein described polypeptides fused to a heterologous polypeptide or amino acid sequence. Example of such chimeric molecules comprise any of the herein described polypeptides fused to an epitope tag sequence or a Fc region of an immunoglobulin.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody.

In yet other embodiments, the invention provides oligonucleotide probes useful for isolating genomic and cDNA nucleotide sequences or as antisense probes, wherein those probes may be derived from any of the above or below described nucleotide sequences.

In other embodiments, the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence that encodes a PRO polypeptide.

In one aspect, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule encoding a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In other aspects, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid

sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule comprising the coding sequence of a full-length PRO polypeptide cDNA as disclosed herein, the coding sequence of a PRO polypeptide lacking the signal peptide as disclosed herein, the coding sequence of an extracellular domain of a transmembrane PRO polypeptide, with or without the signal peptide, as disclosed herein or the coding sequence of any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In a further aspect, the invention concerns an isolated nucleic acid molecule comprising a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule that encodes the same mature polypeptide encoded by any of the human protein cDNAs as disclosed herein, or (b) the complement of the DNA molecule of (a).

Another aspect the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence encoding a PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated, or is complementary to such encoding nucleotide sequence, wherein the transmembrane domain(s) of such polypeptide are disclosed herein. Therefore, soluble extracellular domains of the herein described PRO polypeptides are contemplated.

Another embodiment is directed to fragments of a PRO polypeptide coding sequence, or the complement thereof, that may find use as, for example, hybridization probes, for encoding fragments of a PRO polypeptide that may optionally encode a polypeptide comprising a binding site for an anti-PRO antibody or as antisense oligonucleotide probes. Such nucleic acid fragments are usually at least about 20 nucleotides in length, alternatively at least about 30 nucleotides in length, alternatively at least about 40 nucleotides in length, alternatively at least about 50 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 70 nucleotides in length, alternatively at least about 80 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 100 nucleotides in length, alternatively at least about 110 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 130 nucleotides in length, alternatively at least about 140 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 160

nucleotides in length, alternatively at least about 170 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 190 nucleotides in length, alternatively at least about 200 nucleotides in length, alternatively at least about 250 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 350 nucleotides in length, alternatively at least about 400 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 500 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 700 nucleotides in length, alternatively at least about 800 nucleotides in length, alternatively at least about 900 nucleotides in length and alternatively at least about 1000 nucleotides in length, wherein in this context the term "about" means the referenced nucleotide sequence length plus or minus 10% of that referenced length.

It is noted that novel fragments of a PRO polypeptide-encoding nucleotide sequence may be determined in a routine manner by aligning the PRO polypeptide-encoding nucleotide sequence with other known nucleotide sequences using any of a number of well known sequence alignment programs and determining which PRO polypeptide-encoding nucleotide sequence fragment(s) are novel. All of such PRO polypeptide-encoding nucleotide sequences are contemplated herein. Also contemplated are the PRO polypeptide fragments encoded by these nucleotide molecule fragments, preferably those PRO polypeptide fragments that comprise a binding site for an anti-PRO antibody.

In another embodiment, the invention provides isolated PRO polypeptide encoded by any of the isolated nucleic acid sequences herein above identified.

In a certain aspect, the invention concerns an isolated PRO polypeptide, comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein.

In a further aspect, the invention concerns an isolated PRO polypeptide comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid

sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to an amino acid sequence encoded by any of the human protein cDNAs as disclosed herein.

In a specific aspect, the invention provides an isolated PRO polypeptide without the N-terminal signal sequence and/or the initiating methionine and is encoded by a nucleotide sequence that encodes such an amino acid sequence as herein before described. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

Another aspect the invention provides an isolated PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

In yet another embodiment, the invention concerns agonists and antagonists of a native PRO polypeptide as defined herein. In a particular embodiment, the agonist or antagonist is an anti-PRO antibody or a small molecule.

In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprise contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a native PRO polypeptide.

In a still further embodiment, the invention concerns a composition of matter comprising a PRO polypeptide, or an agonist or antagonist of a PRO polypeptide as herein described, or an anti-PRO antibody, in combination with a carrier. Optionally, the carrier is a pharmaceutically acceptable carrier.

Another embodiment of the present invention is directed to the use of a PRO polypeptide, or an agonist or antagonist thereof as herein before described, or an anti-PRO antibody, for the preparation of a medicament useful in the treatment of a condition which is responsive to the PRO polypeptide, an agonist or antagonist thereof or an anti-PRO antibody.

BRIEF DESCRIPTION OF THE DRAWINGS

In the list of figures for the present application, specific cDNA sequences which are differentially expressed in activated Natural Killer (NK) cells as compared to normal resting NK cells are individually identified with a specific alphanumeric designation. These cDNA sequences are differentially expressed in NK cells that are specifically treated as described in Example 1 below. If start and/or stop

codons have been identified in a cDNA sequence shown in the attached figures, they are shown in bold and underlined font, and the encoded polypeptide is shown in the next consecutive figure.

The Figures 1-1477 show the nucleic acids of the invention and their encoded PRO polypeptides. Also included, for convenience is a List of Figures attached hereto as Appendix A, which gives the figure number and the corresponding DNA or PRO number.

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List of Figures

- Figure 1: DNA329899, NP_002785.1, 200039.s_at
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 Figure 27: DNA324633, NP_004125.2, 200692.s_at
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 Figure 29: DNA88350, NP_000168.1, 200696.s_at
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Figure 546: DNA256401, NP_004063.1, 207652_s_at
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Figure 548: DNA328763, NP_001219.2, 207686_s_at
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Figure 550: DNA325654, NP_054752.1, 207761_s_at
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Figure 552: DNA329184, CITED2, 207980_s_at
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Figure 554: DNA227224, NP_060877.1, 208029_s_at
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Figure 556: DNA328610, NP_112601.2, 208146_s_at
Figure 557: PRO84392
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Figure 560: DNA328611, RASGRP2, 208206_s_at
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Figure 564: PRO4755
Figure 565A-C: DNA331326, ATM, 208442_s_at
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Figure 567: DNA331327, NP_036382.2, 208456_s_at
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Figure 569: DNA331328, NP_000690.1, 208498_s_at
Figure 570: PRO2157
Figure 571A-B: DNA273567, NP_004944.1, 208625_s_at
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Figure 573: DNA329188, BC012142, 208638_at
Figure 574: PRO84810
Figure 575: DNA330139, AK022493, 208657_s_at
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Figure 577: DNA304686, NP_002565.1, 208680_at
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Figure 579: DNA287189, NP_002038.1, 208693_s_at
Figure 580: PRO69475
Figure 581: DNA330140, AF275798, 208696_at
Figure 582: PRO85399
Figure 583: DNA327696, AF228339, 208763_s_at
Figure 584: PRO83679
Figure 585: DNA238565, NP_005907.2, 208795_s_at
Figure 586: PRO39210
Figure 587: DNA330145, NP_002788.1, 208799_at
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Figure 595: DNA331329, DUSP6, 208892_s_at
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Figure 599: DNA327701, NP_001203.1, 208910_s_at
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Figure 601: DNA226500, NP_005619.1, 208916_at
Figure 602: PRO36963
Figure 603: DNA329552, NP_063948.1, 208925_at
Figure 604: PRO85097
Figure 605: DNA328629, NP_006079.1, 208977_x_at
Figure 606: PRO84407
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Figure 608: DNA330155, 7692317.2, 208982_at
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Figure 611: PRO84409
Figure 612: DNA328632, DJ465N24.2.1Homo, 209007_s_at
Figure 613: DNA328635, BC020946, 209026_x_at
Figure 614: PRO84413
Figure 615: DNA274202, NP_006804.1, 209034_at
Figure 616: PRO62131
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Figure 624A-B: DNA328643, HUMHK1A, 209186_at
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Figure 633: PRO84421
Figure 634: DNA227483, NP_003120.1, 209218_at
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Figure 636: DNA331332, BC007405, 209238_at

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 Figure 1059: DNA327890, NP_079021.1, 219493.at
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 Figure 1063: DNA329299, NP_004660.1, 219529.at
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 Figure 1066: PRO85618

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 Figure 1075: DNA328923, NP_075379.1, 219892_at
 Figure 1076: PRO84640
 Figure 1077: DNA330421, NP_057438.2, 219911_s_at
 Figure 1078: PRO85626
 Figure 1079: DNA330423, NP_037466.2, 219920_s_at
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 Figure 1096: PRO85642
 Figure 1097: DNA255734, NP_057607.1, 220646_s_at
 Figure 1098: PRO50791
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 Figure 1104: DNA288247, NP_478059.1, 220892_s_at
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 Figure 1106: DNA331381, BA108L7.2, 220974_x_at
 Figure 1107: PRO86451
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 Figure 1109: PRO69654
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 Figure 1125: PRO37766
 Figure 1126: DNA326221, NP_057179.1, 221521_s_at
 Figure 1127: PRO82634
 Figure 1128: DNA330457, NP_076944.1, 221559_s_at
 Figure 1129: PRO85658
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 Figure 1134: PRO1607
 Figure 1135: DNA330459, NP_060083.1, 221677_s_at
 Figure 1136: PRO50083
 Figure 1137: DNA328961, NP_443112.1, 221756_at
 Figure 1138: PRO84667
 Figure 1139: DNA328961, MGC17330, 221757_at
 Figure 1140: PRO84667
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 Figure 1143: PRO86454
 Figure 1144: DNA330467, NP_060114.1, 221986_s_at
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 Figure 1149: DNA257798, DNA257798, 222037_at
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 Figure 1155: PRO86456
 Figure 1156: DNA328977, NP_071344.1, 222216_s_at
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 Figure 1159: PRO82287
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 Figure 1163: PRO4984
 Figure 1164: DNA327942, NP_060596.1, 222642_s_at
 Figure 1165: PRO83870
 Figure 1166: DNA327943, NP_055399.1, 222646_s_at
 Figure 1167: PRO865
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 Figure 1169: PRO61430
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 Figure 1171: DNA331388, NP_068747.1, 222753_s_at
 Figure 1172: PRO3567
 Figure 1173: DNA329335, AK023411, 222843_at

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Figure 1184: PRO51662
Figure 1185: DNA189412, NP_057390.1, 223054.at
Figure 1186: PRO25349
Figure 1187: DNA288247, PSA, 223062.s.at
Figure 1188: PRO70011
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Figure 1192: PRO80902
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Figure 1198: PRO49387
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Figure 1203A-B: DNA257461, MAIL, 223218.s.at
Figure 1204: PRO52040
Figure 1205: DNA326056, NP_072088.1, 223264.at
Figure 1206: PRO82491
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Figure 1214: PRO49998
Figure 1215: DNA329456, NP_057126.1, 223490.s.at
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Figure 1235: DNA331394, MGC11316, 224482.s.at
Figure 1236: PRO86459
Figure 1237: DNA327976, NP_116120.1, 224511.s.at
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Figure 1240: PRO84953
Figure 1241: DNA331395, TNFRSF18, 224553.s.at
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Figure 1244: PRO86461
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Figure 1251: PRO51940
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Figure 1253: PRO69594
Figure 1254A-B: DNA287330, AB032991, 224801.at
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Figure 1256: PRO23259
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Figure 1258: PRO84957
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Figure 1281: DNA328008, 240051.4, 225541.at

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Figure 1288: PRO86463
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Figure 1294: PRO70021
Figure 1295A-B: DNA331401, 336865.4, 225700.at
Figure 1296: PRO86465
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Figure 1298: DNA254820, DNA254820, 225707.at
Figure 1299: PRO49916
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Figure 1302: PRO84989
Figure 1303A-B: DNA331402, 197159.1, 225845.at
Figure 1304: PRO86466
Figure 1305: DNA287370, BAB14983.1, 225866.at
Figure 1306: PRO69630
Figure 1307A-B: DNA331403, TP53INP1, 225912.at
Figure 1308: PRO86467
Figure 1309A-B: DNA331405, 979005.2, 225956.at
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Figure 1312A-B: DNA329428, 1446144.8, 226218.at
Figure 1313: PRO84999
Figure 1314: DNA193896, DNA193896, 226276.at
Figure 1315: PRO23314
Figure 1316: DNA328028, NP_005773.1, 226319.s.at
Figure 1317: PRO83945
Figure 1318: DNA328028, ALY, 226320.at
Figure 1319: PRO83945
Figure 1320A-B: DNA331406, 399773.27, 226334.s.at
Figure 1321: PRO86470
Figure 1322A-B: DNA331407, 198233.1, 226352.at
Figure 1323: PRO86471
Figure 1324A-B: DNA331409, AB051464, 226370.at
Figure 1325A-B: DNA330675, 177663.2, 226372.at
Figure 1326: PRO85847
Figure 1327: DNA330677, 1384190.6, 226390.at
Figure 1328: PRO85849
Figure 1329: DNA331410, HSM802051, 226416.at
Figure 1330: PRO86474
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Figure 1334: DNA330684, 984114.1, 226548.at
Figure 1335: PRO85855
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Figure 1337: PRO52447
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Figure 1339: PRO83953
Figure 1340: DNA328044, 039170.3, 226936.at
Figure 1341: PRO83958
Figure 1342A-B: DNA330705, 198782.1, 227020.at
Figure 1343: PRO85876
Figure 1344A-B: DNA330706, AF445027, 227027.at
Figure 1345: PRO85877
Figure 1346: DNA331411, 232146.1, 227200.at
Figure 1347: PRO86475
Figure 1348: DNA330715, BC022374, 227212.s.at
Figure 1349: PRO85886
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Figure 1351: PRO86476
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Figure 1353: DNA329444, BC017821, 227278.at
Figure 1354: PRO85012
Figure 1355: DNA330718, 025465.3, 227295.at
Figure 1356: PRO85889
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Figure 1358: PRO85892
Figure 1359: DNA226872, NP_001955.1, 227404.s.at
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Figure 1364: PRO1107
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Figure 1366: PRO85023
Figure 1367: DNA330745, BC011716, 228069.at
Figure 1368: PRO85913
Figure 1369: DNA329460, BC017117, 228092.at
Figure 1370: PRO85027
Figure 1371: DNA330436, AF187016, 228098.s.at
Figure 1372: PRO85639
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Figure 1374: PRO85028
Figure 1375: DNA331413, 286318.11, 228284.at
Figure 1376: PRO86477
Figure 1377: DNA331414, 1450017.11, 228559.at
Figure 1378: PRO86478
Figure 1379: DNA331415, 345279.19, 228788.at
Figure 1380: PRO86479
Figure 1381: DNA330780, 335374.1, 228955.at
Figure 1382: PRO85944
Figure 1383: DNA330784, 233595.21, 228990.at
Figure 1384: PRO85948
Figure 1385: DNA330787, 349981.7, 229041.s.at
Figure 1386: PRO85951
Figure 1387: DNA327307, AF442769, 229215.at
Figure 1388: PRO83560
Figure 1389: DNA287421, 234832.1, 229437.at

Figure 1390: PRO69678
Figure 1391: DNA330799, 481875.1, 229551.x.at
Figure 1392: PRO85963
Figure 1393A-B: DNA330809, 336997.1, 229844.at
Figure 1394: PRO85973
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Figure 1396: PRO23814
Figure 1397A-B: DNA331416, FREQ, 230146.s.at
Figure 1398: PRO11501
Figure 1399: DNA329468, BC011589, 230170.at
Figure 1400: PRO88
Figure 1401: DNA330818, 212282.1, 230304.at
Figure 1402: PRO85982
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Figure 1405: PRO85036
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Figure 1407: PRO86480
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Figure 1409: PRO86481
Figure 1410A-B: DNA287217, DNA287217, 231259.s.at
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Figure 1419: PRO86484
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Figure 1421: PRO84097
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Figure 1423: PRO69661
Figure 1424: DNA331422, 077853.1, 233289.at
Figure 1425: PRO86485
Figure 1426: DNA331423, AF176071, 233467.s.at
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Figure 1433: DNA330891, AK027315, 235113.at
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Figure 1452: DNA328206, 1384214.3, 240277.at
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Figure 1472: DNA331431, 201839.1, 243840.at
Figure 1473: PRO86491
Figure 1474: DNA331432, 151634.1, 244035.at
Figure 1475: PRO86492
Figure 1476: DNA331433, 020071.1, 244434.at
Figure 1477: PRO86493

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

I. Definitions

The terms "PRO polypeptide" and "PRO" as used herein and when immediately followed by a numerical designation refer to various polypeptides, wherein the complete designation (i.e., PRO/number) refers to specific polypeptide sequences as described herein. The terms "PRO/number polypeptide" and "PRO/number" wherein the term "number" is provided as an actual numerical designation as used herein encompass native sequence polypeptides and polypeptide variants (which are further defined herein). The PRO polypeptides described herein may be isolated from a variety of sources, such as from human tissue types or from another source, or prepared by recombinant or synthetic methods. The term "PRO polypeptide" refers to each individual PRO/number polypeptide disclosed herein. All disclosures in this specification which refer to the "PRO polypeptide" refer to each of the polypeptides individually as well as jointly. For example, descriptions of the preparation of, purification of, derivation of, formation of antibodies to or against, administration of, compositions containing, treatment of a disease with, etc., pertain to each polypeptide of the invention individually. The term "PRO polypeptide" also includes variants of the PRO/number polypeptides disclosed herein.

A "native sequence PRO polypeptide" comprises a polypeptide having the same amino acid sequence as the corresponding PRO polypeptide derived from nature. Such native sequence PRO polypeptides can be isolated from nature or can be produced by recombinant or synthetic means. The term "native sequence PRO polypeptide" specifically encompasses naturally-occurring truncated or secreted forms of the specific PRO polypeptide (e.g., an extracellular domain sequence), naturally-occurring variant forms (e.g., alternatively spliced forms) and naturally-occurring allelic variants of the polypeptide. In various embodiments of the invention, the native sequence PRO polypeptides disclosed herein are mature or full-length native sequence polypeptides comprising the full-length amino acids sequences shown in the accompanying figures. Start and stop codons are shown in bold font and underlined in the figures. However, while the PRO polypeptide disclosed in the accompanying figures are shown to begin with methionine residues designated herein as amino acid position 1 in the figures, it is conceivable and possible that other methionine residues located either upstream or downstream from the amino acid position 1 in the figures may be employed as the starting amino acid residue for the PRO polypeptides.

The PRO polypeptide "extracellular domain" or "ECD" refers to a form of the PRO polypeptide which is essentially free of the transmembrane and cytoplasmic domains. Ordinarily, a PRO polypeptide ECD will have less than 1% of such transmembrane and/or cytoplasmic domains and preferably, will have less than 0.5% of such domains. It will be understood that any transmembrane domains identified for the PRO polypeptides of the present invention are identified pursuant to criteria routinely employed in the art for identifying that type of hydrophobic domain. The exact boundaries of a transmembrane domain may vary but most likely by no more than about 5 amino acids at either end of the domain as initially identified herein. Optionally, therefore, an extracellular domain of a PRO polypeptide may contain from about 5 or fewer amino acids on either side of the transmembrane domain/extracellular domain boundary as identified in the Examples or specification and such polypeptides, with or without the associated signal peptide, and nucleic acid encoding them, are contemplated by the present invention.

The approximate location of the "signal peptides" of the various PRO polypeptides disclosed herein are shown in the present specification and/or the accompanying figures. It is noted, however, that the C-terminal boundary of a signal peptide may vary, but most likely by no more than about 5 amino acids on either side of the signal peptide C-terminal boundary as initially identified herein, wherein the C-terminal boundary of the signal peptide may be identified pursuant to criteria routinely employed in the art for identifying that type of amino acid sequence element (e.g., Nielsen et al., Prot. Eng. 10:1-6 (1997) and von Heinje et al., Nucl. Acids. Res. 14:4683-4690 (1986)). Moreover, it is also recognized that, in some cases, cleavage of a signal sequence from a secreted polypeptide is not entirely uniform, resulting in more than one secreted species. These mature polypeptides, where the signal peptide is cleaved within no more than about 5 amino acids on either side of the C-terminal boundary of the signal peptide as identified herein, and the polynucleotides encoding them, are contemplated by the present invention.

"PRO polypeptide variant" means an active PRO polypeptide as defined above or below having at least about 80% amino acid sequence identity with a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Such PRO polypeptide variants include, for instance, PRO polypeptides wherein one or more amino acid residues are added, or deleted, at the N- or C-terminus of the full-length native amino acid sequence. Ordinarily, a PRO polypeptide variant will have at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, PRO variant polypeptides are at least about 10 amino acids in length, alternatively at least about 20 amino acids in length, alternatively at least about 30 amino acids in length, alternatively at least about 40 amino acids in length, alternatively at least about 50 amino acids in length, alternatively at least about 60 amino acids in length, alternatively at least about 70 amino acids in length, alternatively at least about 80 amino acids in length, alternatively at least about 90 amino acids in length, alternatively at least about 100 amino acids in length,

alternatively at least about 150 amino acids in length, alternatively at least about 200 amino acids in length, alternatively at least about 300 amino acids in length, or more.

"Percent (%) amino acid sequence identity" with respect to the PRO polypeptide sequences identified herein is defined as the percentage of amino acid residues in a candidate sequence that are identical with the amino acid residues in the specific PRO polypeptide sequence, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity, and not considering any conservative substitutions as part of the sequence identity. Alignment for purposes of determining percent amino acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. Those skilled in the art can determine appropriate parameters for measuring alignment, including any algorithms needed to achieve maximal alignment over the full length of the sequences being compared. For purposes herein, however, % amino acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

$$100 \text{ times the fraction } X/Y$$

where X is the number of amino acid residues scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A. As examples of % amino acid sequence identity calculations using this method, Tables 2 and 3 demonstrate how to calculate the % amino acid sequence identity of the amino acid sequence designated "Comparison Protein" to the amino acid sequence designated "PRO", wherein "PRO" represents the amino acid sequence of a hypothetical PRO polypeptide of interest, "Comparison Protein" represents the amino acid sequence of a polypeptide against which the "PRO" polypeptide of interest is being compared, and "X", "Y" and "Z" each represent different hypothetical amino acid residues.

Unless specifically stated otherwise, all % amino acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program.

However, % amino acid sequence identity values may also be obtained as described below by using the WU-

BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % amino acid sequence identity value is determined by dividing (a) the number of matching identical amino acid residues between the amino acid sequence of the PRO polypeptide of interest having a sequence derived from the native PRO polypeptide and the comparison amino acid sequence of interest (i.e., the sequence against which the PRO polypeptide of interest is being compared which may be a PRO variant polypeptide) as determined by WU-BLAST-2 by (b) the total number of amino acid residues of the PRO polypeptide of interest. For example, in the statement "a polypeptide comprising an the amino acid sequence A which has or having at least 80% amino acid sequence identity to the amino acid sequence B", the amino acid sequence A is the comparison amino acid sequence of interest and the amino acid sequence B is the amino acid sequence of the PRO polypeptide of interest.

Percent amino acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from <http://www.ncbi.nlm.nih.gov> or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

$$100 \text{ times the fraction } X/Y$$

where X is the number of amino acid residues scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A.

"PRO variant polynucleotide" or "PRO variant nucleic acid sequence" means a nucleic acid molecule which encodes an active PRO polypeptide as defined below and which has at least about 80% nucleic acid sequence identity with a nucleotide acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, a PRO variant polynucleotide will have at least about 80% nucleic acid

sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity with a nucleic acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal sequence, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Variants do not encompass the native nucleotide sequence.

Ordinarily, PRO variant polynucleotides are at least about 30 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 210 nucleotides in length, alternatively at least about 240 nucleotides in length, alternatively at least about 270 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 900 nucleotides in length, or more.

"Percent (%) nucleic acid sequence identity" with respect to PRO-encoding nucleic acid sequences identified herein is defined as the percentage of nucleotides in a candidate sequence that are identical with the nucleotides in the PRO nucleic acid sequence of interest, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity. Alignment for purposes of determining percent nucleic acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. For purposes herein, however, % nucleic acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for nucleic acid sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence

D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

100 times the fraction W/Z

where W is the number of nucleotides scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C. As examples of % nucleic acid sequence identity calculations, Tables 4 and 5, demonstrate how to calculate the % nucleic acid sequence identity of the nucleic acid sequence designated "Comparison DNA" to the nucleic acid sequence designated "PRO-DNA", wherein "PRO-DNA" represents a hypothetical PRO-encoding nucleic acid sequence of interest, "Comparison DNA" represents the nucleotide sequence of a nucleic acid molecule against which the "PRO-DNA" nucleic acid molecule of interest is being compared, and "N", "L" and "V" each represent different hypothetical nucleotides.

Unless specifically stated otherwise, all % nucleic acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program. However, % nucleic acid sequence identity values may also be obtained as described below by using the WU-BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % nucleic acid sequence identity value is determined by dividing (a) the number of matching identical nucleotides between the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest having a sequence derived from the native sequence PRO polypeptide-encoding nucleic acid and the comparison nucleic acid molecule of interest (i.e., the sequence against which the PRO polypeptide-encoding nucleic acid molecule of interest is being compared which may be a variant PRO polynucleotide) as determined by WU-BLAST-2 by (b) the total number of nucleotides of the PRO polypeptide-encoding nucleic acid molecule of interest. For example, in the statement "an isolated nucleic acid molecule comprising a nucleic acid sequence A which has or having at least 80% nucleic acid sequence identity to the nucleic acid sequence B", the nucleic acid sequence A is the comparison nucleic acid molecule of interest and the nucleic acid sequence B is the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest.

Percent nucleic acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from <http://www.ncbi.nlm.nih.gov> or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

$$100 \text{ times the fraction } W/Z$$

where W is the number of nucleotides scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C.

In other embodiments, PRO variant polynucleotides are nucleic acid molecules that encode an active PRO polypeptide and which are capable of hybridizing, preferably under stringent hybridization and wash conditions, to nucleotide sequences encoding a full-length PRO polypeptide as disclosed herein. PRO variant polypeptides may be those that are encoded by a PRO variant polynucleotide.

"Isolated," when used to describe the various polypeptides disclosed herein, means polypeptide that has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials that would typically interfere with diagnostic or therapeutic uses for the polypeptide, and may include enzymes, hormones, and other proteinaceous or non-proteinaceous solutes. In preferred embodiments, the polypeptide will be purified (1) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (2) to homogeneity by SDS-PAGE under non-reducing or reducing conditions using Coomassie blue or, preferably, silver stain. Isolated polypeptide includes polypeptide *in situ* within recombinant cells, since at least one component of the PRO polypeptide natural environment will not be present. Ordinarily, however, isolated polypeptide will be prepared by at least one purification step.

An "isolated" PRO polypeptide-encoding nucleic acid or other polypeptide-encoding nucleic acid is a nucleic acid molecule that is identified and separated from at least one contaminant nucleic acid molecule with which it is ordinarily associated in the natural source of the polypeptide-encoding nucleic acid. An isolated polypeptide-encoding nucleic acid molecule is other than in the form or setting in which it is found in nature. Isolated polypeptide-encoding nucleic acid molecules therefore are distinguished from the specific polypeptide-encoding nucleic acid molecule as it exists in natural cells. However, an isolated polypeptide-encoding nucleic acid molecule includes polypeptide-encoding nucleic acid molecules contained in cells that ordinarily express the polypeptide where, for example, the nucleic acid molecule is in a chromosomal location different from that of natural cells.

The term "control sequences" refers to DNA sequences necessary for the expression of an operably linked coding sequence in a particular host organism. The control sequences that are suitable for prokaryotes, for example, include a promoter, optionally an operator sequence, and a ribosome binding site. Eukaryotic cells are known to utilize promoters, polyadenylation signals, and enhancers.

Nucleic acid is "operably linked" when it is placed into a functional relationship with another nucleic acid sequence. For example, DNA for a presequence or secretory leader is operably linked to DNA for a polypeptide if it is expressed as a preprotein that participates in the secretion of the polypeptide; a promoter or enhancer is operably linked to a coding sequence if it affects the transcription of the sequence; or a ribosome binding site is operably linked to a coding sequence if it is positioned so as to facilitate translation. Generally, "operably linked" means that the DNA sequences being linked are contiguous, and, in the case of a secretory leader, contiguous and in reading phase. However, enhancers do not have to be contiguous. Linking is accomplished by ligation at convenient restriction sites. If such sites do not exist, the synthetic oligonucleotide adaptors or linkers are used in accordance with conventional practice.

The term "antibody" is used in the broadest sense and specifically covers, for example, single anti-PRO monoclonal antibodies (including agonist, antagonist, and neutralizing antibodies), anti-PRO antibody compositions with polypeptidic specificity, single chain anti-PRO antibodies, and fragments of anti-PRO antibodies (see below). The term "monoclonal antibody" as used herein refers to an antibody obtained from a population of substantially homogeneous antibodies, i.e., the individual antibodies comprising the population are identical except for possible naturally-occurring mutations that may be present in minor amounts.

"Stringency" of hybridization reactions is readily determinable by one of ordinary skill in the art, and generally is an empirical calculation dependent upon probe length, washing temperature, and salt concentration. In general, longer probes require higher temperatures for proper annealing, while shorter probes need lower temperatures. Hybridization generally depends on the ability of denatured DNA to reanneal when complementary strands are present in an environment below their melting temperature. The higher the degree of desired homology between the probe and hybridizable sequence, the higher the relative temperature which can be used. As a result, it follows that higher relative temperatures would tend to make the reaction conditions more stringent, while lower temperatures less so. For additional details and explanation of stringency of hybridization reactions, see Ausubel et al., Current Protocols in Molecular Biology, Wiley Interscience Publishers, (1995).

"Stringent conditions" or "high stringency conditions", as defined herein, may be identified by those that: (1) employ low ionic strength and high temperature for washing, for example 0.015 M sodium chloride/0.0015 M sodium citrate/0.1% sodium dodecyl sulfate at 50°C; (2) employ during hybridization a denaturing agent, such as formamide, for example, 50% (v/v) formamide with 0.1% bovine serum albumin/0.1% Ficoll/0.1% polyvinylpyrrolidone/50mM sodium phosphate buffer at pH 6.5 with 750 mM sodium chloride, 75 mM sodium citrate at 42°C; or (3) employ 50% formamide, 5 x SSC (0.75 M NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (sodium chloride/sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash consisting of 0.1 x SSC containing EDTA at 55°C.

"Moderately stringent conditions" may be identified as described by Sambrook et al., Molecular Cloning: A Laboratory Manual, New York: Cold Spring Harbor Press, 1989, and include the use of washing solution and hybridization conditions (e.g., temperature, ionic strength and %SDS) less stringent than those described above. An example of moderately stringent conditions is overnight incubation at 37°C in a

solution comprising: 20% formamide, 5 x SSC (150 mM NaCl, 15 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5 x Denhardt's solution, 10% dextran sulfate, and 20 mg/ml denatured sheared salmon sperm DNA, followed by washing the filters in 1 x SSC at about 37-50°C. The skilled artisan will recognize how to adjust the temperature, ionic strength, etc. as necessary to accommodate factors such as probe length and the like.

The term "epitope tagged" when used herein refers to a chimeric polypeptide comprising a PRO polypeptide fused to a "tag polypeptide". The tag polypeptide has enough residues to provide an epitope against which an antibody can be made, yet is short enough such that it does not interfere with activity of the polypeptide to which it is fused. The tag polypeptide preferably also is fairly unique so that the antibody does not substantially cross-react with other epitopes. Suitable tag polypeptides generally have at least six amino acid residues and usually between about 8 and 50 amino acid residues (preferably, between about 10 and 20 amino acid residues).

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (i.e., is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

"Active" or "activity" for the purposes herein refers to form(s) of a PRO polypeptide which retain a biological and/or an immunological activity of native or naturally-occurring PRO, wherein "biological" activity refers to a biological function (either inhibitory or stimulatory) caused by a native or naturally-occurring PRO other than the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO and an "immunological" activity refers to the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO.

The term "antagonist" is used in the broadest sense, and includes any molecule that partially or fully blocks, inhibits, or neutralizes a biological activity of a native PRO polypeptide disclosed herein. In a similar manner, the term "agonist" is used in the broadest sense and includes any molecule that mimics a biological activity of a native PRO polypeptide disclosed herein. Suitable agonist or antagonist molecules specifically include agonist or antagonist antibodies or antibody fragments, fragments or amino acid sequence variants of native PRO polypeptides, peptides, antisense oligonucleotides, small organic molecules, etc. Methods for identifying agonists or antagonists of a PRO polypeptide may comprise contacting a PRO polypeptide with a candidate agonist or antagonist molecule and measuring a detectable change in one or more biological activities normally associated with the PRO polypeptide.

"Treatment" refers to both therapeutic treatment and prophylactic or preventative measures, wherein the object is to prevent or slow down (lessen) the targeted pathologic condition or disorder. Those

in need of treatment include those already with the disorder as well as those prone to have the disorder or those in whom the disorder is to be prevented.

"Chronic" administration refers to administration of the agent(s) in a continuous mode as opposed to an acute mode, so as to maintain the initial therapeutic effect (activity) for an extended period of time.

5 "Intermittent" administration is treatment that is not consecutively done without interruption, but rather is cyclic in nature.

"Mammal" for purposes of treatment refers to any animal classified as a mammal, including humans, domestic and farm animals, and zoo, sports, or pet animals, such as dogs, cats, cattle, horses, sheep, pigs, goats, rabbits, etc. Preferably, the mammal is human.

10 Administration "in combination with" one or more further therapeutic agents includes simultaneous (concurrent) and consecutive administration in any order.

"Carriers" as used herein include pharmaceutically acceptable carriers, excipients, or stabilizers which are nontoxic to the cell or mammal being exposed thereto at the dosages and concentrations employed. Often the physiologically acceptable carrier is an aqueous pH buffered solution. Examples of
15 physiologically acceptable carriers include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptide; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrans; chelating
20 agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt-forming counterions such as sodium; and/or nonionic surfactants such as TWEENTM, polyethylene glycol (PEG), and PLURONICSTM.

"Antibody fragments" comprise a portion of an intact antibody, preferably the antigen binding or variable region of the intact antibody. Examples of antibody fragments include Fab, Fab', F(ab')₂, and Fv fragments; diabodies; linear antibodies (Zapata et al., Protein Eng. 8(10): 1057-1062 [1995]); single-chain
25 antibody molecules; and multispecific antibodies formed from antibody fragments.

Papain digestion of antibodies produces two identical antigen-binding fragments, called "Fab" fragments, each with a single antigen-binding site, and a residual "Fc" fragment, a designation reflecting the ability to crystallize readily. Pepsin treatment yields an F(ab')₂ fragment that has two antigen-combining sites and is still capable of cross-linking antigen.

30 "Fv" is the minimum antibody fragment which contains a complete antigen-recognition and -binding site. This region consists of a dimer of one heavy- and one light-chain variable domain in tight, non-covalent association. It is in this configuration that the three CDRs of each variable domain interact to define an antigen-binding site on the surface of the V_H-V_L dimer. Collectively, the six CDRs confer antigen-binding specificity to the antibody. However, even a single variable domain (or half of an Fv comprising
35 only three CDRs specific for an antigen) has the ability to recognize and bind antigen, although at a lower affinity than the entire binding site.

The Fab fragment also contains the constant domain of the light chain and the first constant domain (CH1) of the heavy chain. Fab fragments differ from Fab' fragments by the addition of a few residues at the carboxy terminus of the heavy chain CH1 domain including one or more cysteines from the antibody hinge
40 region. Fab'-SH is the designation herein for Fab' in which the cysteine residue(s) of the constant domains

bear a free thiol group. F(ab')₂ antibody fragments originally were produced as pairs of Fab' fragments which have hinge cysteines between them. Other chemical couplings of antibody fragments are also known.

The "light chains" of antibodies (immunoglobulins) from any vertebrate species can be assigned to one of two clearly distinct types, called kappa and lambda, based on the amino acid sequences of their
5 constant domains.

Depending on the amino acid sequence of the constant domain of their heavy chains, immunoglobulins can be assigned to different classes. There are five major classes of immunoglobulins: IgA, IgD, IgE, IgG, and IgM, and several of these may be further divided into subclasses (isotypes), e.g., IgG1, IgG2, IgG3, IgG4, IgA, and IgA2.

10 "Single-chain Fv" or "sFv" antibody fragments comprise the V_H and V_L domains of antibody, wherein these domains are present in a single polypeptide chain. Preferably, the Fv polypeptide further comprises a polypeptide linker between the V_H and V_L domains which enables the sFv to form the desired structure for antigen binding. For a review of sFv, see Pluckthun in The Pharmacology of Monoclonal Antibodies, vol. 113, Rosenberg and Moore eds., Springer-Verlag, New York, pp. 269-315 (1994).

15 The term "diabodies" refers to small antibody fragments with two antigen-binding sites, which fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) in the same polypeptide chain (V_H-V_L). By using a linker that is too short to allow pairing between the two domains on the same chain, the domains are forced to pair with the complementary domains of another chain and create two antigen-binding sites. Diabodies are described more fully in, for example, EP 404,097; WO
20 93/11161; and Hollinger et al., Proc. Natl. Acad. Sci. USA, 90:6444-6448 (1993).

An "isolated" antibody is one which has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials which would interfere with diagnostic or therapeutic uses for the antibody, and may include enzymes, hormones, and other proteinaceous or nonproteinaceous solutes. In preferred embodiments, the antibody
25 will be purified (1) to greater than 95% by weight of antibody as determined by the Lowry method, and most preferably more than 99% by weight, (2) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (3) to homogeneity by SDS-PAGE under reducing or nonreducing conditions using Coomassie blue or, preferably, silver stain. Isolated antibody includes the antibody in situ within recombinant cells since at least one component of the
30 antibody's natural environment will not be present. Ordinarily, however, isolated antibody will be prepared by at least one purification step.

An antibody that "specifically binds to" or is "specific for" a particular polypeptide or an epitope on a particular polypeptide is one that binds to that particular polypeptide or epitope on a particular polypeptide without substantially binding to any other polypeptide or polypeptide epitope.

35 The word "label" when used herein refers to a detectable compound or composition which is conjugated directly or indirectly to the antibody so as to generate a "labeled" antibody. The label may be detectable by itself (e.g. radioisotope labels or fluorescent labels) or, in the case of an enzymatic label, may catalyze chemical alteration of a substrate compound or composition which is detectable.

By "solid phase" is meant a non-aqueous matrix to which the antibody of the present invention can
40 adhere. Examples of solid phases encompassed herein include those formed partially or entirely of glass

(e.g., controlled pore glass), polysaccharides (e.g., agarose), polyacrylamides, polystyrene, polyvinyl alcohol and silicones. In certain embodiments, depending on the context, the solid phase can comprise the well of an assay plate; in others it is a purification column (e.g., an affinity chromatography column). This term also includes a discontinuous solid phase of discrete particles, such as those described in U.S. Patent No. 4,275,149.

A "liposome" is a small vesicle composed of various types of lipids, phospholipids and/or surfactant which is useful for delivery of a drug (such as a PRO polypeptide or antibody thereto) to a mammal. The components of the liposome are commonly arranged in a bilayer formation, similar to the lipid arrangement of biological membranes.

A "small molecule" is defined herein to have a molecular weight below about 500 Daltons.

The term "immune related disease" means a disease in which a component of the immune system of a mammal causes, mediates or otherwise contributes to a morbidity in the mammal. Also included are diseases in which stimulation or intervention of the immune response has an ameliorative effect on progression of the disease. Included within this term are immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

The term "Natural Killer cell mediated disease" means a disease in which NK cells directly or indirectly mediate or otherwise contribute to a morbidity in a mammal. The NK cell-mediated disease may be associated with cell mediated effects, lymphokine mediated effects, *etc.*, and even effects associated with other immune cells if the cells are involved.

Examples of immune-related and inflammatory diseases, some of which are immune mediated, which can be treated according to the invention include systemic lupus erythematosus, rheumatoid arthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease. Infectious diseases including viral diseases such as AIDS (HIV infection), hepatitis A, B, C, D, and E, herpes, *etc.*, bacterial infections, fungal infections, protozoal infections and parasitic infections.

The term "effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which results in achieving a particular stated purpose. An "effective amount" of a PRO polypeptide or agonist or antagonist thereof may be determined empirically. Furthermore, a "therapeutically effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which is effective for achieving a stated therapeutic effect. This amount may also be determined empirically.

The term "cytotoxic agent" as used herein refers to a substance that inhibits or prevents the function of cells and/or causes destruction of cells. The term is intended to include radioactive isotopes (*e.g.*, I^{131} , I^{125} , Y^{90} and Re^{186}), chemotherapeutic agents, and toxins such as enzymatically active toxins of bacterial, fungal, plant or animal origin, or fragments thereof.

A "chemotherapeutic agent" is a chemical compound useful in the treatment of cancer. Examples of chemotherapeutic agents include adriamycin, doxorubicin, epirubicin, 5-fluorouracil, cytosine arabinoside ("Ara-C"), cyclophosphamide, thiotepa, busulfan, cytoxin, taxoids, *e.g.*, paclitaxel (Taxol, Bristol-Myers Squibb Oncology, Princeton, NJ), and doxetaxel (Taxotere, Rhône-Poulenc Rorer, Antony, France), toxotere, methotrexate, cisplatin, melphalan, vinblastine, bleomycin, etoposide, ifosfamide, mitomycin C, mitoxantrone, vincristine, vinorelbine, carboplatin, teniposide, daunomycin, carminomycin, aminopterin, dactinomycin, mitomycins, esperamicins (see U.S. Pat. No. 4,675,187), melphalan and other related nitrogen mustards. Also included in this definition are hormonal agents that act to regulate or inhibit hormone action on tumors such as tamoxifen and onapristone.

A "growth inhibitory agent" when used herein refers to a compound or composition which inhibits growth of a cell, especially cancer cell overexpressing any of the genes identified herein, either *in vitro* or *in vivo*. Thus, the growth inhibitory agent is one which significantly reduces the percentage of cells overexpressing such genes in S phase. Examples of growth inhibitory agents include agents that block cell cycle progression (at a place other than S phase), such as agents that induce G1 arrest and M-phase arrest. Classical M-phase blockers include the vincas (vincristine and vinblastine), taxol, and topo II inhibitors such as doxorubicin, epirubicin, daunorubicin, etoposide, and bleomycin. Those agents that arrest G1 also spill over into S-phase arrest, for example, DNA alkylating agents such as tamoxifen, prednisone, dacarbazine, mechlorethamine, cisplatin, methotrexate, 5-fluorouracil, and ara-C. Further information can be found in *The Molecular Basis of Cancer*, Mendelsohn and Israel, eds., Chapter 1, entitled "Cell cycle regulation, oncogens, and antineoplastic drugs" by Murakami *et al.* (WB Saunders: Philadelphia, 1995), especially p. 13.

The term "cytokine" is a generic term for proteins released by one cell population which act on another cell as intercellular mediators. Examples of such cytokines are lymphokines, monokines, and traditional polypeptide hormones. Included among the cytokines are growth hormone such as human growth hormone, N-methionyl human growth hormone, and bovine growth hormone; parathyroid hormone; thyroxine; insulin; proinsulin; relaxin; prorelaxin; glycoprotein hormones such as follicle stimulating hormone (FSH), thyroid stimulating hormone (TSH), and luteinizing hormone (LH); hepatic growth factor; fibroblast growth factor; prolactin; placental lactogen; tumor necrosis factor- α and - β ; mullerian-inhibiting substance; mouse gonadotropin-associated peptide; inhibin; activin; vascular endothelial growth factor; integrin; thrombopoietin (TPO); nerve growth factors such as NGF- β ; platelet-growth factor; transforming growth factors (TGFs) such as TGF- α and TGF- β ; insulin-like growth factor-I and -II; erythropoietin (EPO);

osteoinductive factors; interferons such as interferon- α , - β , and - γ ; colony stimulating factors (CSFs) such as macrophage-CSF (M-CSF); granulocyte-macrophage-CSF (GM-CSF); and granulocyte-CSF (G-CSF); interleukins (ILs) such as IL-1, IL-1 α , IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-11, IL-12, IL-15 and tumor necrosis factor such as TNF- α or TNF- β ; and other polypeptide factors including LIF and kit ligand (KL). As used herein, the term cytokine includes proteins from natural sources or from recombinant cell culture and biologically active equivalents of the native sequence cytokines.

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (*i.e.*, is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

Table 1

```

/*
5  *
  * C-C increased from 12 to 15
  * Z is average of EQ
  * B is average of ND
10  * match with stop is _M; stop-stop = 0; J (joker) match = 0
  */
#define _M      -8      /* value of a match with a stop */

int  _day[26][26] = {
15  /* A B C D E F G H I J K L M N O P Q R S T U V W X Y Z */
  /* A */ { 2, 0, -2, 0, 0, -4, 1, -1, -1, 0, -1, -2, -1, 0, _M, 1, 0, -2, 1, 1, 0, 0, -6, 0, -3, 0},
  /* B */ { 0, 3, -4, 3, 2, -5, 0, 1, -2, 0, 0, -3, -2, 2, _M, -1, 1, 0, 0, 0, 0, -2, -5, 0, -3, 1},
  /* C */ {-2, -4, 15, -5, -5, -4, -3, -3, -2, 0, -5, -6, -5, -4, _M, -3, -5, -4, 0, -2, 0, -2, -8, 0, 0, -5},
  /* D */ { 0, 3, -5, 4, 3, -6, 1, 1, -2, 0, 0, -4, -3, 2, _M, -1, 2, -1, 0, 0, 0, -2, -7, 0, -4, 2},
  /* E */ { 0, 2, -5, 3, 4, -5, 0, 1, -2, 0, 0, -3, -2, 1, _M, -1, 2, -1, 0, 0, 0, -2, -7, 0, -4, 3},
20  /* F */ {-4, -5, -4, -6, -5, 9, -5, -2, 1, 0, -5, 2, 0, -4, _M, -5, -5, -4, -3, -3, 0, -1, 0, 0, 7, -5},
  /* G */ { 1, 0, -3, 1, 0, -5, 5, -2, -3, 0, -2, -4, -3, 0, _M, -1, -1, -3, 1, 0, 0, -1, -7, 0, -5, 0},
  /* H */ {-1, 1, -3, 1, 1, -2, -2, 6, -2, 0, 0, -2, -2, 2, _M, 0, 3, 2, -1, -1, 0, -2, -3, 0, 0, 2},
  /* I */ {-1, -2, -2, -2, -2, 1, -3, -2, 5, 0, -2, 2, 2, -2, _M, -2, -2, -2, -1, 0, 0, 4, -5, 0, -1, -2},
  /* J */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
25  /* K */ {-1, 0, -5, 0, 0, -5, -2, 0, -2, 0, 5, -3, 0, 1, _M, -1, 1, 3, 0, 0, 0, -2, -3, 0, -4, 0},
  /* L */ {-2, -3, -6, -4, -3, 2, -4, -2, 2, 0, -3, 6, 4, -3, _M, -3, -2, -3, -3, -1, 0, 2, -2, 0, -1, -2},
  /* M */ {-1, -2, -5, -3, -2, 0, -3, -2, 2, 0, 0, 4, 6, -2, _M, -2, -1, 0, -2, -1, 0, 2, -4, 0, -2, -1},
  /* N */ { 0, 2, -4, 2, 1, -4, 0, 2, -2, 0, 1, -3, -2, 2, _M, -1, 1, 0, 1, 0, 0, -2, -4, 0, -2, 1},
  /* O */ {_M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M},
30  /* P */ { 1, -1, -3, -1, -1, -5, -1, 0, -2, 0, -1, -3, -2, -1, _M, 6, 0, 0, 1, 0, 0, -1, -6, 0, -5, 0},
  /* Q */ { 0, 1, -5, 2, 2, -5, -1, 3, -2, 0, 1, -2, -1, 1, _M, 0, 4, 1, -1, -1, 0, -2, -5, 0, -4, 3},
  /* R */ {-2, 0, 0, -4, -1, -1, -4, -3, 2, -2, 0, 3, -3, 0, 0, _M, 0, 1, 6, 0, -1, 0, -2, 2, 0, -4, 0},
  /* S */ { 1, 0, 0, 0, 0, -3, 1, -1, -1, 0, 0, -3, -2, 1, _M, 1, -1, 0, 2, 1, 0, -1, -2, 0, -3, 0},
  /* T */ { 1, 0, -2, 0, 0, -3, 0, -1, 0, 0, 0, -1, -1, 0, _M, 0, -1, -1, 1, 3, 0, 0, -5, 0, -3, 0},
35  /* U */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
  /* V */ { 0, -2, -2, -2, -2, -1, -1, -2, 4, 0, -2, 2, 2, -2, _M, -1, -2, -2, -1, 0, 0, 4, -6, 0, -2, -2},
  /* W */ {-6, -5, -8, -7, -7, 0, -7, -3, -5, 0, -3, -2, -4, -4, _M, -6, -5, 2, -2, -5, 0, -6, 17, 0, 0, -6},
  /* X */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0},
  /* Y */ {-3, -3, 0, -4, -4, 7, -5, 0, -1, 0, -4, -1, -2, -2, _M, -5, -4, -4, -3, -3, 0, -2, 0, 0, 10, -4},
40  /* Z */ { 0, 1, -5, 2, 3, -5, 0, 2, -2, 0, 0, -2, -1, 1, _M, 0, 3, 0, 0, 0, 0, -2, -6, 0, -4, 4}
};

```

Table 1 (cont')

```

/*
*/
#include <stdio.h>
#include <ctype.h>

#define MAXJMP      16      /* max jumps in a diag */
#define MAXGAP      24      /* don't continue to penalize gaps larger than this */
#define JMPS        1024    /* max jmps in an path */
#define MX          4       /* save if there's at least MX-1 bases since last jmp */

#define DMAT         3      /* value of matching bases */
#define DMIS         0      /* penalty for mismatched bases */
#define DINS0        8      /* penalty for a gap */
#define DINS1        1      /* penalty per base */
#define PINS0        8      /* penalty for a gap */
#define PINS1        4      /* penalty per residue */

struct jmp {
    short          n[MAXJMP]; /* size of jmp (neg for dely) */
    unsigned short x[MAXJMP]; /* base no. of jmp in seq x */
}; /* limits seq to 2^16 -1 */

struct diag {
    int            score;      /* score at last jmp */
    long           offset;     /* offset of prev block */
    short          jmp;        /* current jmp index */
    struct jmp      jp;        /* list of jmps */
};

struct path {
    int            spc;        /* number of leading spaces */
    short          n[JMPS]; /* size of jmp (gap) */
    int            x[JMPS]; /* loc of jmp (last elem before gap) */
};

char *ofile; /* output file name */
char *namex[2]; /* seq names: getseqs() */
char *prog; /* prog name for err msgs */
char *seqx[2]; /* seqs: getseqs() */
int dmax; /* best diag: nw() */
int dmax0; /* final diag */
int dna; /* set if dna: main() */
int endgaps; /* set if penalizing end gaps */
int gapx, gapy; /* total gaps in seqs */
int len0, len1; /* seq lens */
int ngapx, ngapy; /* total size of gaps */
int smax; /* max score: nw() */
int *xbm; /* bitmap for matching */
long offset; /* current offset in jmp file */
struct diag dx; /* holds diagonals */
struct path pp[2]; /* holds path for seqs */

char *calloc(), *malloc(), *index(), *strcpy();
char *getseq(), *g_calloc();

```


Table 1 (cont')

```

/* Needleman-Wunsch alignment program
*
* usage: progs file1 file2
5  * where file1 and file2 are two dna or two protein sequences.
* The sequences can be in upper- or lower-case and may contain ambiguity
* Any lines beginning with ';', '>' or '<' are ignored
* Max file length is 65535 (limited by unsigned short x in the jmp struct)
* A sequence with 1/3 or more of its elements ACGTU is assumed to be DNA
10 * Output is in the file "align.out"
*
* The program may create a tmp file in /tmp to hold info about traceback.
* Original version developed under BSD 4.3 on a vax 8650
*/
15 #include "nw.h"
#include "day.h"

static _dbval[26] = {
20 1,14,2,13,0,0,4,11,0,0,12,0,3,15,0,0,0,5,6,8,8,7,9,0,10,0
};

static _pbval[26] = {
25 1, 2[(1<<('D'-'A'))|(1<<('N'-'A'))], 4, 8, 16, 32, 64,
128, 256, 0xFFFFFFFF, 1<<10, 1<<11, 1<<12, 1<<13, 1<<14,
1<<15, 1<<16, 1<<17, 1<<18, 1<<19, 1<<20, 1<<21, 1<<22,
1<<23, 1<<24, 1<<25|(1<<('E'-'A'))|(1<<('Q'-'A'))
};

main(ac, av)
30 main
int ac;
char *av[ ];
{
35 prog = av[0];
if (ac != 3) {
printf(stderr, "usage: %s file1 file2\n", prog);
printf(stderr, "where file1 and file2 are two dna or two protein sequences.\n");
printf(stderr, "The sequences can be in upper- or lower-case\n");
40 printf(stderr, "Any lines beginning with ';', '>' or '<' are ignored\n");
printf(stderr, "Output is in the file \"align.out\"\n");
exit(1);
}
namex[0] = av[1];
namex[1] = av[2];
45 seqx[0] = getseq(namex[0], &len0);
seqx[1] = getseq(namex[1], &len1);
xbm = (dna)? _dbval : _pbval;

endgaps = 0; /* 1 to penalize endgaps */
50 ofile = "align.out"; /* output file */

nw(); /* fill in the matrix, get the possible jmps */
readjmps(); /* get the actual jmps */
print(); /* print stats, alignment */
55 cleanup(0); /* unlink any tmp files */
}
60

```

Table 1 (cont')

```

/* do the alignment, return best score: main()
 * dna: values in Fitch and Smith, PNAS, 80, 1382-1386, 1983
 * pro: PAM 250 values
5  * When scores are equal, we prefer mismatches to any gap, prefer
 * a new gap to extending an ongoing gap, and prefer a gap in seqx
 * to a gap in seq y.
 */
nw()
10 {
    char      *px, *py;          /* seqs and ptrs */
    int        *ndely, *dely;     /* keep track of dely */
    int        ndelx, delx;       /* keep track of delx */
15  int        *tmp;             /* for swapping row0, row1 */
    int        mis;              /* score for each type */
    int        ins0, ins1;        /* insertion penalties */
    register   id;               /* diagonal index */
    register   ij;              /* jmp index */
20  register   *col0, *coll;      /* score for curr, last row */
    register   xx, yy;           /* index into seqs */

    dx = (struct diag *)g_calloc("to get diags", len0+len1+1, sizeof(struct diag));

25  ndely = (int *)g_calloc("to get ndely", len1+1, sizeof(int));
    dely = (int *)g_calloc("to get dely", len1+1, sizeof(int));
    col0 = (int *)g_calloc("to get col0", len1+1, sizeof(int));
    coll = (int *)g_calloc("to get coll", len1+1, sizeof(int));
    ins0 = (dna)? DINS0 : PINS0;
    ins1 = (dna)? DINS1 : PINS1;

    smax = -10000;
    if (endgaps) {
35      for (col0[0] = dely[0] = -ins0, yy = 1; yy <= len1; yy++) {
          col0[yy] = dely[yy] = col0[yy-1] - ins1;
          ndely[yy] = yy;
      }
      col0[0] = 0;          /* Waterman Bull Math Biol 84 */
    }
    else
40      for (yy = 1; yy <= len1; yy++)
          dely[yy] = -ins0;

    /* fill in match matrix
    */
45  for (px = seqx[0], xx = 1; xx <= len0; px++, xx++) {
        /* initialize first entry in col
        */
        if (endgaps) {
50          if (xx == 1)
              coll[0] = delx = -(ins0+ins1);
          else
              coll[0] = delx = col0[0] - ins1;
          ndelx = xx;
55        }
        else {
            coll[0] = 0;
            delx = -ins0;
            ndelx = 0;
60        }
    }

```

Table 1 (cont')**...nw**

```

5      for (py = seqx[1], yy = 1; yy <= len1; py++, yy++) {
        mis = col0[yy-1];
        if (dna)
            mis += (xbm[*px-'A']&xbm[*py-'A'])? DMAT : DMIS;
        else
            mis += _day[*px-'A'][*py-'A'];

10      /* update penalty for del in x seq;
        * favor new del over ongong del
        * ignore MAXGAP if weighting endgaps
        */
        if (endgaps || ndely[yy] < MAXGAP) {
15            if (col0[yy] - ins0 >= dely[yy]) {
                dely[yy] = col0[yy] - (ins0+ins1);
                ndely[yy] = 1;
            } else {
                dely[yy] -= ins1;
20                ndely[yy]++;
            }
        } else {
            if (col0[yy] - (ins0+ins1) >= dely[yy]) {
25                dely[yy] = col0[yy] - (ins0+ins1);
                ndely[yy] = 1;
            } else
                ndely[yy]++;
        }

30      /* update penalty for del in y seq;
        * favor new del over ongong del
        */
        if (endgaps || ndelx < MAXGAP) {
35            if (col1[yy-1] - ins0 >= delx) {
                delx = col1[yy-1] - (ins0+ins1);
                ndelx = 1;
            } else {
                delx -= ins1;
40                ndelx++;
            }
        } else {
            if (col1[yy-1] - (ins0+ins1) >= delx) {
                delx = col1[yy-1] - (ins0+ins1);
45                ndelx = 1;
            } else
                ndelx++;
        }

50      /* pick the maximum score; we're favoring
        * mis over any del and delx over dely
        */

```

55

60

Table 1 (cont')

...nw

```

id = xx - yy + len1 - 1;
if (mis >= delx && mis >= dely[yy])
    col1[yy] = mis;
else if (delx >= dely[yy]) {
    col1[yy] = delx;
    ij = dx[id].ijmp;
    if (dx[id].jp.n[0] && (!dna || (ndelx >= MAXJMP
10    && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
        dx[id].ijmp++;
        if (++ij >= MAXJMP) {
            writejmps(id);
            ij = dx[id].ijmp = 0;
            dx[id].offset = offset;
            offset += sizeof(struct jmp) + sizeof(offset);
        }
    }
    dx[id].jp.n[ij] = ndelx;
    dx[id].jp.x[ij] = xx;
    dx[id].score = delx;
}
else {
    col1[yy] = dely[yy];
    ij = dx[id].ijmp;
    if (dx[id].jp.n[0] && (!dna || (ndely[yy] >= MAXJMP
25    && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
        dx[id].ijmp++;
        if (++ij >= MAXJMP) {
            writejmps(id);
            ij = dx[id].ijmp = 0;
            dx[id].offset = offset;
            offset += sizeof(struct jmp) + sizeof(offset);
        }
    }
    dx[id].jp.n[ij] = -ndely[yy];
    dx[id].jp.x[ij] = xx;
    dx[id].score = dely[yy];
}
if (xx == len0 && yy < len1) {
    /* last col
    */
    if (endgaps)
        col1[yy] -= ins0+ins1*(len1-yy);
    if (col1[yy] > smax) {
        smax = col1[yy];
        dmax = id;
    }
}
if (endgaps && xx < len0)
    col1[yy-1] -= ins0+ins1*(len0-xx);
if (col1[yy-1] > smax) {
    smax = col1[yy-1];
    dmax = id;
}
tmp = col0; col0 = col1; col1 = tmp;
}
(void) free((char *)ndely);
(void) free((char *)dely);
(void) free((char *)col0);
(void) free((char *)col1);
}

```

Table 1 (cont')

```

/*
 *
 * print() -- only routine visible outside this module
 *
5  * static:
 * getmat() -- trace back best path, count matches: print()
 * pr_align() -- print alignment of described in array p[ ]: print()
 * dumpblock() -- dump a block of lines with numbers, stars: pr_align()
10 * nums() -- put out a number line: dumpblock()
 * putline() -- put out a line (name, [num], seq, [num]): dumpblock()
 * stars() -- put a line of stars: dumpblock()
 * stripname() -- strip any path and prefix from a seqname
 */
15
#include "nw.h"

#define SPC      3
#define P_LINE   256    /* maximum output line */
20 #define P_SPC   3      /* space between name or num and seq */

extern _day[26][26];
int olen;                /* set output line length */
FILE *fx;                /* output file */
25

print()

    print
{
30     int      lx, ly, firstgap, lastgap;    /* overlap */

    if ((fx = fopen(ofile, "w")) == 0) {
        fprintf(stderr, "%s: can't write %s\n", prog, ofile);
        cleanup(1);
    }
35     fprintf(fx, "<first sequence: %s (length = %d)\n", namex[0], len0);
     fprintf(fx, "<second sequence: %s (length = %d)\n", namex[1], len1);
     olen = 60;
     lx = len0;
     ly = len1;
40     firstgap = lastgap = 0;
     if (dmax < len1 - 1) {    /* leading gap in x */
         pp[0].spc = firstgap = len1 - dmax - 1;
         ly -= pp[0].spc;
     }
45     else if (dmax > len1 - 1) {    /* leading gap in y */
         pp[1].spc = firstgap = dmax - (len1 - 1);
         lx -= pp[1].spc;
     }
     if (dmax0 < len0 - 1) {    /* trailing gap in x */
50         lastgap = len0 - dmax0 - 1;
         lx -= lastgap;
     }
     else if (dmax0 > len0 - 1) {    /* trailing gap in y */
55         lastgap = dmax0 - (len0 - 1);
         ly -= lastgap;
     }
     getmat(lx, ly, firstgap, lastgap);
     pr_align();
60 }

```

Table 1 (cont')

```

/*
 * trace back the best path, count matches
 */
5  static
   getmat(lx, ly, firstgap, lastgap)                                getmat
       int      lx, ly;                                           /* "core" (minus endgaps) */
       int      firstgap, lastgap;                                /* leading trailing overlap */
   {
10      int      nm, i0, i1, siz0, siz1;
       char      outx[32];
       double     pct;
       register   n0, n1;
15      register char  *p0, *p1;

       /* get total matches, score
        */
       i0 = i1 = siz0 = siz1 = 0;
       p0 = seqx[0] + pp[1].spc;
20      p1 = seqx[1] + pp[0].spc;
       n0 = pp[1].spc + 1;
       n1 = pp[0].spc + 1;

       nm = 0;
25      while ( *p0 && *p1 ) {
           if (siz0) {
               p1++;
               n1++;
               siz0--;
30           }
           else if (siz1) {
               p0++;
               n0++;
               siz1--;
35           }
           else {
               if (xbm[*p0-'A']&xbm[*p1-'A'])
                   nm++;
               if (n0++ == pp[0].x[i0])
                   siz0 = pp[0].n[i0++];
40               if (n1++ == pp[1].x[i1])
                   siz1 = pp[1].n[i1++];
               p0++;
               p1++;
45           }
       }

       /* pct homology:
        * if penalizing endgaps, base is the shorter seq
50      * else, knock off overhangs and take shorter core
        */
       if (endgaps)
           lx = (len0 < len1)? len0 : len1;
       else
55         lx = (lx < ly)? lx : ly;
       pct = 100.*(double)nm/(double)lx;
       fprintf(fx, "\n");
       fprintf(fx, "<%d match%s in an overlap of %d: %.2f percent similarity\n",
60         nm, (nm == 1)? "" : "es", lx, pct);

```

Table 1 (cont')

```

fprintf(fx, "<gaps in first sequence: %d", gapx);
if (gapx) {
    (void) sprintf(outx, " (%d %s%s)",
        ngapx, (dna)? "base": "residue", (ngapx == 1)? "" : "s");
    fprintf(fx, "%s", outx);

    fprintf(fx, ", gaps in second sequence: %d", gapy);
    if (gapy) {
        (void) sprintf(outx, " (%d %s%s)",
            ngapy, (dna)? "base": "residue", (ngapy == 1)? "" : "s");
        fprintf(fx, "%s", outx);
    }
    if (dna)
        fprintf(fx,
            "\n<score: %d (match = %d, mismatch = %d, gap penalty = %d + %d per base)\n",
            smax, DMAT, DMIS, DINS0, DINS1);
    else
        fprintf(fx,
            "\n<score: %d (Dayhoff PAM 250 matrix, gap penalty = %d + %d per residue)\n",
            smax, PINS0, PINS1);
    if (endgaps)
        fprintf(fx,
            "<endgaps penalized. left endgap: %d %s%s, right endgap: %d %s%s\n",
            firstgap, (dna)? "base" : "residue", (firstgap == 1)? "" : "s",
            lastgap, (dna)? "base" : "residue", (lastgap == 1)? "" : "s");
    else
        fprintf(fx, "<endgaps not penalized\n");
}
static nm; /* matches in core -- for checking */
static lmax; /* lengths of stripped file names */
static ij[2]; /* jmp index for a path */
static nc[2]; /* number at start of current line */
static ni[2]; /* current elem number -- for gapping */
static siz[2];
static char *ps[2]; /* ptr to current element */
static char *po[2]; /* ptr to next output char slot */
static char out[2][P_LINE]; /* output line */
static char star[P_LINE]; /* set by stars() */

/*
 * print alignment of described in struct path pp[ ]
 */
static
pr_align()
{
    int nn; /* char count */
    int more;
    register i;

    for (i = 0, lmax = 0; i < 2; i++) {
        nn = stripname(name[i]);
        if (nn > lmax)
            lmax = nn;

        nc[i] = 1;
        ni[i] = 1;
        siz[i] = ij[i] = 0;
        ps[i] = seqx[i];
        po[i] = out[i];
    }
}

```

...getmat

pr_align

Table 1 (cont')**...pr_align**

```

for (nn = nm = 0, more = 1; more; ) {
    for (i = more = 0; i < 2; i++) {
        /*
5         * do we have more of this sequence?
        */
        if (!*ps[i])
            continue;

10        more++;

        if (pp[i].spc) { /* leading space */
            *po[i]++ = ' ';
            pp[i].spc--;
15        }
        else if (siz[i]) { /* in a gap */
            *po[i]++ = '-';
            siz[i]--;
20        }
        else { /* we're putting a seq element
            */
            *po[i] = *ps[i];
            if (islower(*ps[i]))
                *ps[i] = toupper(*ps[i]);
25            po[i]++;
            ps[i]++;

            /*
            * are we at next gap for this seq?
            */
30            if (ni[i] == pp[i].x[ij[i]]) {
                /*
                * we need to merge all gaps
                * at this location
                */
35                siz[i] = pp[i].n[ij[i]++];
                while (ni[i] == pp[i].x[ij[i]])
                    siz[i] += pp[i].n[ij[i]++];

                }
                ni[i]++;
40            }
        }
        if (++nn == olen || !more && nn) {
            dumpblock();
45            for (i = 0; i < 2; i++)
                po[i] = out[i];
            nn = 0;
        }
50    }

    /*
    * dump a block of lines, including numbers, stars: pr_align()
    */
55    static
    dumpblock()
    {
        register i;
60        for (i = 0; i < 2; i++)
            *po[i]-- = '\0';
    }

```


Table 1 (cont')**...dumpblock**

```

5      (void) putc('\n', fx);
      for (i = 0; i < 2; i++) {
          if (*out[i] && (*out[i] != ' ' || *(po[i]) != ' ')) {
              if (i == 0)
                  nums(i);
              if (i == 0 && *out[1])
                  stars();
              putline(i);
              if (i == 0 && *out[1])
                  fprintf(fx, star);
              if (i == 1)
                  nums(i);
          }
      }
}

20 /*
   * put out a number line: dumpblock()
   */
   static
   nums(ix)
25     int      ix;      /* index in out[ ] holding seq line */
   {
       char      nline[P_LINE];
       register  i, j;
       register char *pn, *px, *py;
30
       for (pn = nline, i = 0; i < lmax+P_SPC; i++, pn++)
           *pn = ' ';
       for (i = nc[ix], py = out[ix]; *py; py++, pn++) {
           if (*py == ' ' || *py == '\n')
35               *pn = ' ';
           else {
               if (i%10 == 0 || (i == 1 && nc[ix] != 1)) {
                   j = (i < 0)? -i : i;
                   for (px = pn; j; j /= 10, px--)
40                       *px = j%10 + '0';
                   if (i < 0)
                       *px = '-';
               }
               else
45                   *pn = ' ';
               i++;
           }
       }
       *pn = '\0';
       nc[ix] = i;
       for (pn = nline; *pn; pn++)
           (void) putc(*pn, fx);
       (void) putc('\n', fx);
50   }

55 /*
   * put out a line (name, [num], seq, [num]): dumpblock()
   */
   static
   putline(ix)
60     int      ix;      {

```

nums**putline**

Table 1 (cont')**...putline**

```

5      int          i;
      register char *px;

      for (px = namex[ix], i = 0; *px && *px != ':'; px++, i++)
          (void) putc(*px, fx);
10     for (; i < lmax+P_SPC; i++)
          (void) putc(' ', fx);

      /* these count from 1:
      * ni[ ] is current element (from 1)
      * nc[ ] is number at start of current line
15     */
      for (px = out[ix]; *px; px++)
          (void) putc(*px&0x7F, fx);
      (void) putc('\n', fx);
20 }

/*
 * put a line of stars (seqs always in out[0], out[1]): dumpblock()
 */
25 static
stars()
{
    stars
    {
30        int          i;
        register char *p0, *p1, cx, *px;

        if (!*out[0] || (*out[0] == ' ' && *(po[0]) == ' ') ||
            !*out[1] || (*out[1] == ' ' && *(po[1]) == ' '))
            return;
35        px = star;
        for (i = lmax+P_SPC; i; i--)
            *px++ = ' ';

        for (p0 = out[0], p1 = out[1]; *p0 && *p1; p0++, p1++) {
40            if (isalpha(*p0) && isalpha(*p1)) {

                if (xbm[*p0-'A']&xbm[*p1-'A']) {
                    cx = '*';
                    nm++;
45                }
                else if (!dna && _day[*p0-'A'][*p1-'A'] > 0)
                    cx = '.';
                else
                    cx = ' ';
50            }
            else
                cx = ' ';
            *px++ = cx;
55        }
        *px++ = '\n';
        *px = '\0';
    }
60

```

Table 1 (cont')

```

/*
 * strip path or prefix from pn, return len: pr_align()
 */
5 static
  stripname(pn)
    stripname
      char *pn; /* file name (may be path) */
10 {
    register char *px, *py;

    py = 0;
    for (px = pn; *px; px++)
      if (*px == '/')
15         py = px + 1;
    if (py)
      (void) strcpy(pn, py);
    return(strlen(pn));
20 }

```

25

30

35

40

45

50

55

60

Table 1 (cont')

```

/*
 * cleanup() -- cleanup any tmp file
 * getseq() -- read in seq, set dna, len, maxlen
5  * g_calloc() -- calloc() with error checkin
 * readjumps() -- get the good jumps, from tmp file if necessary
 * writejumps() -- write a filled array of jumps to a tmp file: nw()
 */
10 #include "nw.h"
#include <sys/file.h>

char    *jname = "/tmp/homgXXXXXX";      /* tmp file for jumps */
FILE    *fj;

15 int    cleanup();                      /* cleanup tmp file */
long    lseek();

/*
 * remove any tmp file if we blow
20 */
cleanup(i)                                cleanup
{
    int    i;
    if (fj)
        (void) unlink(jname);
    exit(i);
}

/*
30 * read, return ptr to seq, set dna, len, maxlen
 * skip lines starting with ';', '<', or '>'
 * seq in upper or lower case
 */
char    *
35 getseq(file, len)                      getseq
{
    char    *file;      /* file name */
    int     *len;       /* seq len */
    {
        char    line[1024], *pseq;
        register char *px, *py;
        int     natgc, tlen;
        FILE    *fp;

        if ((fp = fopen(file, "r")) == 0) {
45             fprintf(stderr, "%s: can't read %s\n", prog, file);
             exit(1);
        }
        tlen = natgc = 0;
        while (fgets(line, 1024, fp)) {
50             if (*line == ';' || *line == '<' || *line == '>')
                 continue;
             for (px = line; *px != '\n'; px++)
                 if (isupper(*px) || islower(*px))
                     tlen++;
55         }
        if ((pseq = malloc((unsigned)(tlen+6))) == 0) {
             fprintf(stderr, "%s: malloc() failed to get %d bytes for %s\n", prog, tlen+6, file);
             exit(1);
        }
        pseq[0] = pseq[1] = pseq[2] = pseq[3] = '\0';
60

```

Table 1 (cont')

...getseq

```

5      py = pseq + 4;
      *len = tlen;
      rewind(fp);

      while (fgets(line, 1024, fp)) {
          if (*line == ';' || *line == '<' || *line == '>')
              continue;
10         for (px = line; *px != '\n'; px++) {
              if (isupper(*px))
                  *py++ = *px;
              else if (islower(*px))
                  *py++ = toupper(*px);
15             if (index("ATGCU", *(py-1)))
                 natgc++;
          }
      }
      *py++ = '\0';
      *py = '\0';
      (void) fclose(fp);
      dna = natgc > (tlen/3);
      return(pseq+4);
25 }

char *
g_alloc(msg, nx, sz)
char *msg;          /* program, calling routine */
int nx, sz;         /* number and size of elements */
30 {
    char *px, *calloc();

    if ((px = calloc((unsigned)nx, (unsigned)sz)) == 0) {
        if (*msg) {
35             fprintf(stderr, "%s: g_alloc() failed %s (n=%d, sz=%d)\n", prog, msg, nx, sz);
            exit(1);
        }
    }
    return(px);
40 }

/*
 * get final jmps from dx[ ] or tmp file, set pp[ ], reset dmax: main()
 */
45 readjmps()
    readjmps
{
    int fd = -1;
    int siz, i0, i1;
50     register i, j, xx;

    if (fj) {
        (void) fclose(fj);
        if ((fd = open(jname, O_RDONLY, 0)) < 0) {
55             fprintf(stderr, "%s: can't open() %s\n", prog, jname);
            cleanup(1);
        }
    }

    for (i = i0 = i1 = 0, dmax0 = dmax, xx = len0; ; i++) {
60         while (1) {
            for (j = dx[dmax].ijmp; j >= 0 && dx[dmax].jp.x[j] >= xx; j--)
                ;

```

g_alloc

Table 1 (cont')**...readjmps**

```

5         if (j < 0 && dx[dmax].offset && fj) {
            (void) lseek(fd, dx[dmax].offset, 0);
            (void) read(fd, (char *)&dx[dmax].jp, sizeof(struct jmp));
            (void) read(fd, (char *)&dx[dmax].offset, sizeof(dx[dmax].offset));
            dx[dmax].ijmp = MAXJMP-1;
        }
10        else
            break;
    }
    if (i >= JMPS) {
        fprintf(stderr, "%s: too many gaps in alignment\n", prog);
        cleanup(1);
15    }
    if (j >= 0) {
        siz = dx[dmax].jp.n[j];
        xx = dx[dmax].jp.x[j];
        dmax += siz;
20        if (siz < 0) { /* gap in second seq */
            pp[1].n[i1] = -siz;
            xx += siz;
            /* id = xx - yy + len1 - 1
            */
25            pp[1].x[i1] = xx - dmax + len1 - 1;
            gapy++;
            ngapy -= siz;
            /* ignore MAXGAP when doing endgaps */
            siz = (-siz < MAXGAP || endgaps)? -siz : MAXGAP;
30            i1++;
        }
        else if (siz > 0) { /* gap in first seq */
            pp[0].n[i0] = siz;
            pp[0].x[i0] = xx;
35            gapx++;
            ngapx += siz;
            /* ignore MAXGAP when doing endgaps */
            siz = (siz < MAXGAP || endgaps)? siz : MAXGAP;
40            i0++;
        }
    }
    else
        break;
}

45    /* reverse the order of jmps
    */
    for (j = 0, i0--; j < i0; j++, i0--) {
50        i = pp[0].n[j]; pp[0].n[j] = pp[0].n[i0]; pp[0].n[i0] = i;
        i = pp[0].x[j]; pp[0].x[j] = pp[0].x[i0]; pp[0].x[i0] = i;
    }
    for (j = 0, i1--; j < i1; j++, i1--) {
55        i = pp[1].n[j]; pp[1].n[j] = pp[1].n[i1]; pp[1].n[i1] = i;
        i = pp[1].x[j]; pp[1].x[j] = pp[1].x[i1]; pp[1].x[i1] = i;
    }
    if (fd >= 0)
        (void) close(fd);
    if (fj) {
60        (void) unlink(jname);
        fj = 0;
        offset = 0;
    }
}

```

Table 1 (cont')

```

/*
5  * write a filled jmp struct offset of the prev one (if any): nw()
*/
writejumps(ix)
    writejumps
    int      ix;
10  {
    char      *mktemp();
    if (!fj) {
        if (mktemp(jname) < 0) {
15             fprintf(stderr, "%s: can't mktemp() %s\n", prog, jname);
            cleanup(1);
        }
        if ((fj = fopen(jname, "w")) == 0) {
            fprintf(stderr, "%s: can't write %s\n", prog, jname);
20             exit(1);
        }
    }
    (void) fwrite((char *)&dx[ix].jp, sizeof(struct jmp), 1, fj);
    (void) fwrite((char *)&dx[ix].offset, sizeof(dx[ix].offset), 1, fj);
25  }

```

Table 2

5 PRO XXXXXXXXXXXXXXXXXXXX (Length = 15 amino acids)
 Comparison Protein XXXXXYYYYYYYY (Length = 12 amino acids)
 % amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as
 10 determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) =
 5 divided by 15 = 33.3%

Table 3

15 PRO XXXXXXXXXXXX (Length = 10 amino acids)
 Comparison Protein XXXXXYYYYYYYZZYZ (Length = 15 amino acids)
 % amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as
 20 determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) =
 5 divided by 10 = 50%

Table 4

25 PRO-DNA NNNNNNNNNNNNNN (Length = 14 nucleotides)
 Comparison DNA NNNNNNLLLLLLLLLL (Length = 16 nucleotides)
 % nucleic acid sequence identity =

30 (the number of identically matching nucleotides between the two nucleic acid sequences as determined by
 ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) =
 6 divided by 14 = 42.9%

Table 5

35 PRO-DNA NNNNNNNNNNNN (Length = 12 nucleotides)
 Comparison DNA NNNNLLLVV (Length = 9 nucleotides)

% nucleic acid sequence identity =

40

(the number of identically matching nucleotides between the two nucleic acid sequences as determined by ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) =
4 divided by 12 = 33.3%

5 II. Compositions and Methods of the Invention

A. Full-Length PRO Polypeptides

The present invention provides newly identified and isolated nucleotide sequences encoding polypeptides referred to in the present application as PRO polypeptides. In particular, cDNAs encoding various PRO polypeptides have been identified and isolated, as disclosed in further detail in the Examples
10 below. However, for sake of simplicity, in the present specification the protein encoded by the full length native nucleic acid molecules disclosed herein as well as all further native homologues and variants included in the foregoing definition of PRO, will be referred to as "PRO/number", regardless of their origin or mode of preparation.

As disclosed in the Examples below, various cDNA clones have been disclosed. The predicted
15 amino acid sequence can be determined from the nucleotide sequence using routine skill. For the PRO polypeptides and encoding nucleic acids described herein, Applicants have identified what is believed to be the reading frame best identifiable with the sequence information available at the time.

B. PRO Polypeptide Variants

In addition to the full-length native sequence PRO polypeptides described herein, it is contemplated
20 that PRO variants can be prepared. PRO variants can be prepared by introducing appropriate nucleotide changes into the PRO DNA, and/or by synthesis of the desired PRO polypeptide. Those skilled in the art will appreciate that amino acid changes may alter post-translational processes of the PRO, such as changing the number or position of glycosylation sites or altering the membrane anchoring characteristics.

Variations in the native full-length sequence PRO or in various domains of the PRO described
25 herein, can be made, for example, using any of the techniques and guidelines for conservative and non-conservative mutations set forth, for instance, in U.S. Patent No. 5,364,934. Variations may be a substitution, deletion or insertion of one or more codons encoding the PRO that results in a change in the amino acid sequence of the PRO as compared with the native sequence PRO. Optionally, the variation is by substitution of at least one amino acid with any other amino acid in one or more of the domains of the PRO.
30 Guidance in determining which amino acid residue may be inserted, substituted or deleted without adversely affecting the desired activity may be found by comparing the sequence of the PRO with that of homologous known protein molecules and minimizing the number of amino acid sequence changes made in regions of high homology. Amino acid substitutions can be the result of replacing one amino acid with another amino acid having similar structural and/or chemical properties, such as the replacement of a leucine with a serine,
35 i.e., conservative amino acid replacements. Insertions or deletions may optionally be in the range of about 1 to 5 amino acids. The variation allowed may be determined by systematically making insertions, deletions or substitutions of amino acids in the sequence and testing the resulting variants for activity exhibited by the full-length or mature native sequence.

PRO polypeptide fragments are provided herein. Such fragments may be truncated at the N-
40 terminus or C-terminus, or may lack internal residues, for example, when compared with a full length native

protein. Certain fragments lack amino acid residues that are not essential for a desired biological activity of the PRO polypeptide.

PRO fragments may be prepared by any of a number of conventional techniques. Desired peptide fragments may be chemically synthesized. An alternative approach involves generating PRO fragments by enzymatic digestion, e.g., by treating the protein with an enzyme known to cleave proteins at sites defined by particular amino acid residues, or by digesting the DNA with suitable restriction enzymes and isolating the desired fragment. Yet another suitable technique involves isolating and amplifying a DNA fragment encoding a desired polypeptide fragment, by polymerase chain reaction (PCR). Oligonucleotides that define the desired termini of the DNA fragment are employed at the 5' and 3' primers in the PCR. Preferably, PRO polypeptide fragments share at least one biological and/or immunological activity with the native PRO polypeptide disclosed herein.

In particular embodiments, conservative substitutions of interest are shown in Table 6 under the heading of preferred substitutions. If such substitutions result in a change in biological activity, then more substantial changes, denominated exemplary substitutions in Table 6, or as further described below in reference to amino acid classes, are introduced and the products screened.

Table 6

5	Original	Exemplary	Preferred
	Residue	Substitutions	Substitutions
	Ala (A)	val; leu; ile	val
	Arg (R)	lys; gln; asn	lys
	Asn (N)	gln; his; lys; arg	gln
	Asp (D)	glu	glu
10	Cys (C)	ser	ser
	Gln (Q)	asn	asn
	Glu (E)	asp	asp
	Gly (G)	pro; ala	ala
	His (H)	asn; gln; lys; arg	arg
15	Ile (I)	leu; val; met; ala; phe; norleucine	leu
	Leu (L)	norleucine; ile; val; met; ala; phe	ile
	Lys (K)	arg; gln; asn	arg
20	Met (M)	leu; phe; ile	leu
	Phe (F)	leu; val; ile; ala; tyr	leu
	Pro (P)	ala	ala
	Ser (S)	thr	thr
	Thr (T)	ser	ser
25	Trp (W)	tyr; phe	tyr
	Tyr (Y)	trp; phe; thr; ser	phe
	Val (V)	ile; leu; met; phe; ala; norleucine	leu

30 Substantial modifications in function or immunological identity of the PRO polypeptide are accomplished by selecting substitutions that differ significantly in their effect on maintaining (a) the structure of the polypeptide backbone in the area of the substitution, for example, as a sheet or helical conformation, (b) the charge or hydrophobicity of the molecule at the target site, or (c) the bulk of the side chain. Naturally occurring residues are divided into groups based on common side-chain properties:

- 35 (1) hydrophobic: norleucine, met, ala, val, leu, ile;
 (2) neutral hydrophilic: cys, ser, thr;
 (3) acidic: asp, glu;
 (4) basic: asn, gln, his, lys, arg;
 (5) residues that influence chain orientation: gly, pro; and
 40 (5) aromatic: trp, tyr, phe.

Non-conservative substitutions will entail exchanging a member of one of these classes for another class. Such substituted residues also may be introduced into the conservative substitution sites or, more preferably, into the remaining (non-conserved) sites.

The variations can be made using methods known in the art such as oligonucleotide-mediated (site-directed) mutagenesis, alanine scanning, and PCR mutagenesis. Site-directed mutagenesis [Carter et al., Nucl. Acids Res., 13:4331 (1986); Zoller et al., Nucl. Acids Res., 10:6487 (1987)], cassette mutagenesis [Wells et al., Gene, 34:315 (1985)], restriction selection mutagenesis [Wells et al., Philos. Trans. R. Soc. London SerA, 317:415 (1986)] or other known techniques can be performed on the cloned DNA to produce the PRO variant DNA.

Scanning amino acid analysis can also be employed to identify one or more amino acids along a contiguous sequence. Among the preferred scanning amino acids are relatively small, neutral amino acids. Such amino acids include alanine, glycine, serine, and cysteine. Alanine is typically a preferred scanning amino acid among this group because it eliminates the side-chain beyond the beta-carbon and is less likely to alter the main-chain conformation of the variant [Cunningham and Wells, Science, 244: 1081-1085 (1989)]. Alanine is also typically preferred because it is the most common amino acid. Further, it is frequently found in both buried and exposed positions [Creighton, The Proteins, (W.H. Freeman & Co., N.Y.); Chothia, J. Mol. Biol., 150:1 (1976)]. If alanine substitution does not yield adequate amounts of variant, an isoteric amino acid can be used.

C. Modifications of PRO

Covalent modifications of PRO are included within the scope of this invention. One type of covalent modification includes reacting targeted amino acid residues of a PRO polypeptide with an organic derivatizing agent that is capable of reacting with selected side chains or the N- or C- terminal residues of the PRO. Derivatization with bifunctional agents is useful, for instance, for crosslinking PRO to a water-insoluble support matrix or surface for use in the method for purifying anti-PRO antibodies, and vice-versa. Commonly used crosslinking agents include, e.g., 1,1-bis(diazoacetyl)-2-phenylethane, glutaraldehyde, N-hydroxysuccinimide esters, for example, esters with 4-azidosalicylic acid, homobifunctional imidoesters, including disuccinimidyl esters such as 3,3'-dithiobis(succinimidylpropionate), bifunctional maleimides such as bis-N-maleimido-1,8-octane and agents such as methyl-3-[(p-azidophenyl)dithio]propioimide.

Other modifications include deamidation of glutamyl and asparaginy residues to the corresponding glutamyl and aspartyl residues, respectively, hydroxylation of proline and lysine, phosphorylation of hydroxyl groups of seryl or threonyl residues, methylation of the α -amino groups of lysine, arginine, and histidine side chains [T.E. Creighton, Proteins: Structure and Molecular Properties, W.H. Freeman & Co., San Francisco, pp. 79-86 (1983)], acetylation of the N-terminal amine, and amidation of any C-terminal carboxyl group.

Another type of covalent modification of the PRO polypeptide included within the scope of this invention comprises altering the native glycosylation pattern of the polypeptide. "Altering the native glycosylation pattern" is intended for purposes herein to mean deleting one or more carbohydrate moieties found in native sequence PRO (either by removing the underlying glycosylation site or by deleting the glycosylation by chemical and/or enzymatic means), and/or adding one or more glycosylation sites that are not present in the native sequence PRO. In addition, the phrase includes qualitative changes in the glycosylation of the native proteins, involving a change in the nature and proportions of the various carbohydrate moieties present.

Addition of glycosylation sites to the PRO polypeptide may be accomplished by altering the amino acid sequence. The alteration may be made, for example, by the addition of, or substitution by, one or more serine or threonine residues to the native sequence PRO (for O-linked glycosylation sites). The PRO amino acid sequence may optionally be altered through changes at the DNA level, particularly by mutating the DNA encoding the PRO polypeptide at preselected bases such that codons are generated that will translate into the desired amino acids.

Another means of increasing the number of carbohydrate moieties on the PRO polypeptide is by chemical or enzymatic coupling of glycosides to the polypeptide. Such methods are described in the art, e.g., in WO 87/05330 published 11 September 1987, and in Aplin and Wriston, CRC Crit. Rev. Biochem., pp. 259-306 (1981).

5 Removal of carbohydrate moieties present on the PRO polypeptide may be accomplished chemically or enzymatically or by mutational substitution of codons encoding for amino acid residues that serve as targets for glycosylation. Chemical deglycosylation techniques are known in the art and described, for instance, by Hakimuddin, et al., Arch. Biochem. Biophys., 259:52 (1987) and by Edge et al., Anal. Biochem., 118:131 (1981). Enzymatic cleavage of carbohydrate moieties on polypeptides can be achieved
10 by the use of a variety of endo- and exo-glycosidases as described by Thotakura et al., Meth. Enzymol., 138:350 (1987).

Another type of covalent modification of PRO comprises linking the PRO polypeptide to one of a variety of nonproteinaceous polymers, e.g., polyethylene glycol (PEG), polypropylene glycol, or polyoxyalkylenes, in the manner set forth in U.S. Patent Nos. 4,640,835; 4,496,689; 4,301,144; 4,670,417;
15 4,791,192 or 4,179,337.

The PRO of the present invention may also be modified in a way to form a chimeric molecule comprising PRO fused to another, heterologous polypeptide or amino acid sequence.

In one embodiment, such a chimeric molecule comprises a fusion of the PRO with a tag polypeptide which provides an epitope to which an anti-tag antibody can selectively bind. The epitope tag is
20 generally placed at the amino- or carboxyl- terminus of the PRO. The presence of such epitope-tagged forms of the PRO can be detected using an antibody against the tag polypeptide. Also, provision of the epitope tag enables the PRO to be readily purified by affinity purification using an anti-tag antibody or another type of affinity matrix that binds to the epitope tag. Various tag polypeptides and their respective antibodies are well known in the art. Examples include poly-histidine (poly-his) or poly-histidine-glycine
25 (poly-his-gly) tags; the flu HA tag polypeptide and its antibody 12CA5 [Field et al., Mol. Cell. Biol., 8:2159-2165 (1988)]; the c-myc tag and the 8F9, 3C7, 6E10, G4, B7 and 9E10 antibodies thereto [Evan et al., Molecular and Cellular Biology, 5:3610-3616 (1985)]; and the Herpes Simplex virus glycoprotein D (gD) tag and its antibody [Paborsky et al., Protein Engineering, 3(6):547-553 (1990)]. Other tag polypeptides include the Flag-peptide [Hopp et al., BioTechnology, 6:1204-1210 (1988)]; the KT3 epitope peptide
30 [Martin et al., Science, 255:192-194 (1992)]; an alpha-tubulin epitope peptide [Skinner et al., J. Biol. Chem., 266:15163-15166 (1991)]; and the T7 gene 10 protein peptide tag [Lutz-Freyermuth et al., Proc. Natl. Acad. Sci. USA, 87:6393-6397 (1990)].

In an alternative embodiment, the chimeric molecule may comprise a fusion of the PRO with an immunoglobulin or a particular region of an immunoglobulin. For a bivalent form of the chimeric molecule
35 (also referred to as an "immunoadhesin"), such a fusion could be to the Fc region of an IgG molecule. The Ig fusions preferably include the substitution of a soluble (transmembrane domain deleted or inactivated) form of a PRO polypeptide in place of at least one variable region within an Ig molecule. In a particularly preferred embodiment, the immunoglobulin fusion includes the hinge, CH2 and CH3, or the hinge, CH1, CH2 and CH3 regions of an IgG1 molecule. For the production of immunoglobulin fusions see also US
40 Patent No. 5,428,130 issued June 27, 1995.

D. Preparation of PRO

The description below relates primarily to production of PRO by culturing cells transformed or transfected with a vector containing PRO nucleic acid. It is, of course, contemplated that alternative methods, which are well known in the art, may be employed to prepare PRO. For instance, the PRO sequence, or portions thereof, may be produced by direct peptide synthesis using solid-phase techniques [see, e.g., Stewart et al., Solid-Phase Peptide Synthesis, W.H. Freeman Co., San Francisco, CA (1969); Merrifield, J. Am. Chem. Soc., **85**:2149-2154 (1963)]. *In vitro* protein synthesis may be performed using manual techniques or by automation. Automated synthesis may be accomplished, for instance, using an Applied Biosystems Peptide Synthesizer (Foster City, CA) using manufacturer's instructions. Various portions of the PRO may be chemically synthesized separately and combined using chemical or enzymatic methods to produce the full-length PRO.

1. Isolation of DNA Encoding PRO

DNA encoding PRO may be obtained from a cDNA library prepared from tissue believed to possess the PRO mRNA and to express it at a detectable level. Accordingly, human PRO DNA can be conveniently obtained from a cDNA library prepared from human tissue, such as described in the Examples. The PRO-encoding gene may also be obtained from a genomic library or by known synthetic procedures (e.g., automated nucleic acid synthesis).

Libraries can be screened with probes (such as antibodies to the PRO or oligonucleotides of at least about 20-80 bases) designed to identify the gene of interest or the protein encoded by it. Screening the cDNA or genomic library with the selected probe may be conducted using standard procedures, such as described in Sambrook et al., Molecular Cloning: A Laboratory Manual (New York: Cold Spring Harbor Laboratory Press, 1989). An alternative means to isolate the gene encoding PRO is to use PCR methodology [Sambrook et al., supra; Dieffenbach et al., PCR Primer: A Laboratory Manual (Cold Spring Harbor Laboratory Press, 1995)].

The Examples below describe techniques for screening a cDNA library. The oligonucleotide sequences selected as probes should be of sufficient length and sufficiently unambiguous that false positives are minimized. The oligonucleotide is preferably labeled such that it can be detected upon hybridization to DNA in the library being screened. Methods of labeling are well known in the art, and include the use of radiolabels like ³²P-labeled ATP, biotinylation or enzyme labeling. Hybridization conditions, including moderate stringency and high stringency, are provided in Sambrook et al., supra.

Sequences identified in such library screening methods can be compared and aligned to other known sequences deposited and available in public databases such as GenBank or other private sequence databases. Sequence identity (at either the amino acid or nucleotide level) within defined regions of the molecule or across the full-length sequence can be determined using methods known in the art and as described herein.

Nucleic acid having protein coding sequence may be obtained by screening selected cDNA or genomic libraries using the deduced amino acid sequence disclosed herein for the first time, and, if necessary, using conventional primer extension procedures as described in Sambrook et al., supra, to detect precursors and processing intermediates of mRNA that may not have been reverse-transcribed into cDNA.

2. Selection and Transformation of Host Cells

Host cells are transfected or transformed with expression or cloning vectors described herein for PRO production and cultured in conventional nutrient media modified as appropriate for inducing promoters, selecting transformants, or amplifying the genes encoding the desired sequences. The culture conditions, such as media, temperature, pH and the like, can be selected by the skilled artisan without undue experimentation. In general, principles, protocols, and practical techniques for maximizing the productivity of cell cultures can be found in Mammalian Cell Biotechnology: a Practical Approach, M. Butler, ed. (IRL Press, 1991) and Sambrook et al., supra.

Methods of eukaryotic cell transfection and prokaryotic cell transformation are known to the ordinarily skilled artisan, for example, CaCl₂, CaPO₄, liposome-mediated and electroporation. Depending on the host cell used, transformation is performed using standard techniques appropriate to such cells. The calcium treatment employing calcium chloride, as described in Sambrook et al., supra, or electroporation is generally used for prokaryotes. Infection with *Agrobacterium tumefaciens* is used for transformation of certain plant cells, as described by Shaw et al., Gene, 23:315 (1983) and WO 89/05859 published 29 June 1989. For mammalian cells without such cell walls, the calcium phosphate precipitation method of Graham and van der Eb, Virology, 52:456-457 (1978) can be employed. General aspects of mammalian cell host system transfections have been described in U.S. Patent No. 4,399,216. Transformations into yeast are typically carried out according to the method of Van Solingen et al., J. Bact., 130:946 (1977) and Hsiao et al., Proc. Natl. Acad. Sci. (USA), 76:3829 (1979). However, other methods for introducing DNA into cells, such as by nuclear microinjection, electroporation, bacterial protoplast fusion with intact cells, or polycations, e.g., polybrene, polyornithine, may also be used. For various techniques for transforming mammalian cells, see Keown et al., Methods in Enzymology, 185:527-537 (1990) and Mansour et al., Nature, 336:348-352 (1988).

Suitable host cells for cloning or expressing the DNA in the vectors herein include prokaryote, yeast, or higher eukaryote cells. Suitable prokaryotes include but are not limited to eubacteria, such as Gram-negative or Gram-positive organisms, for example, Enterobacteriaceae such as *E. coli*. Various *E. coli* strains are publicly available, such as *E. coli* K12 strain MM294 (ATCC 31,446); *E. coli* X1776 (ATCC 31,537); *E. coli* strain W3110 (ATCC 27,325) and K5 772 (ATCC 53,635). Other suitable prokaryotic host cells include Enterobacteriaceae such as *Escherichia*, e.g., *E. coli*, *Enterobacter*, *Erwinia*, *Klebsiella*, *Proteus*, *Salmonella*, e.g., *Salmonella typhimurium*, *Serratia*, e.g., *Serratia marcescans*, and *Shigella*, as well as *Bacilli* such as *B. subtilis* and *B. licheniformis* (e.g., *B. licheniformis* 41P disclosed in DD 266,710 published 12 April 1989), *Pseudomonas* such as *P. aeruginosa*, and *Streptomyces*. These examples are illustrative rather than limiting. Strain W3110 is one particularly preferred host or parent host because it is a common host strain for recombinant DNA product fermentations. Preferably, the host cell secretes minimal amounts of proteolytic enzymes. For example, strain W3110 may be modified to effect a genetic mutation in the genes encoding proteins endogenous to the host, with examples of such hosts including *E. coli* W3110 strain 1A2, which has the complete genotype *tonA* ; *E. coli* W3110 strain 9E4, which has the complete genotype *tonA ptr3*; *E. coli* W3110 strain 27C7 (ATCC 55,244), which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT kan'*; *E. coli* W3110 strain 37D6, which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT rbs7 ilvG kan'*; *E. coli* W3110 strain 40B4, which is strain

37D6 with a non-kanamycin resistant *degP* deletion mutation; and an *E. coli* strain having mutant periplasmic protease disclosed in U.S. Patent No. 4,946,783 issued 7 August 1990. Alternatively, *in vitro* methods of cloning, e.g., PCR or other nucleic acid polymerase reactions, are suitable.

In addition to prokaryotes, eukaryotic microbes such as filamentous fungi or yeast are suitable cloning or expression hosts for PRO-encoding vectors. *Saccharomyces cerevisiae* is a commonly used lower eukaryotic host microorganism. Others include *Schizosaccharomyces pombe* (Beach and Nurse, Nature, 290: 140 [1981]; EP 139,383 published 2 May 1985); *Kluyveromyces* hosts (U.S. Patent No. 4,943,529; Fleer et al., Bio/Technology, 9:968-975 (1991)) such as, e.g., *K. lactis* (MW98-8C, CBS683, CBS4574; Louvencourt et al., J. Bacteriol., 154(2):737-742 [1983]), *K. fragilis* (ATCC 12,424), *K. bulgaricus* (ATCC 16,045), *K. wickerhamii* (ATCC 24,178), *K. waltii* (ATCC 56,500), *K. drosophilum* (ATCC 36,906; Van den Berg et al., Bio/Technology, 8:135 (1990)), *K. thermotolerans*, and *K. marxianus*; *Yarrowia* (EP 402,226); *Pichia pastoris* (EP 183,070; Sreekrishna et al., J. Basic Microbiol., 28:265-278 [1988]); *Candida*; *Trichoderma reesia* (EP 244,234); *Neurospora crassa* (Case et al., Proc. Natl. Acad. Sci. USA, 76:5259-5263 [1979]); *Schwanniomyces* such as *Schwanniomyces occidentalis* (EP 394,538 published 31 October 1990); and filamentous fungi such as, e.g., *Neurospora*, *Penicillium*, *Tolypocladium* (WO 91/00357 published 10 January 1991), and *Aspergillus* hosts such as *A. nidulans* (Ballance et al., Biochem. Biophys. Res. Commun., 112:284-289 [1983]; Tilburn et al., Gene, 26:205-221 [1983]; Yelton et al., Proc. Natl. Acad. Sci. USA, 81: 1470-1474 [1984]) and *A. niger* (Kelly and Hynes, EMBO J., 4:475-479 [1985]). Methylophilic yeasts are suitable herein and include, but are not limited to, yeast capable of growth on methanol selected from the genera consisting of *Hansenula*, *Candida*, *Kloeckera*, *Pichia*, *Saccharomyces*, *Torulopsis*, and *Rhodotorula*. A list of specific species that are exemplary of this class of yeasts may be found in C. Anthony, The Biochemistry of Methylophilic Yeasts, 269 (1982).

Suitable host cells for the expression of glycosylated PRO are derived from multicellular organisms. Examples of invertebrate cells include insect cells such as *Drosophila* S2 and *Spodoptera* Sf9, as well as plant cells. Examples of useful mammalian host cell lines include Chinese hamster ovary (CHO) and COS cells. More specific examples include monkey kidney CV1 line transformed by SV40 (COS-7, ATCC CRL 1651); human embryonic kidney line (293 or 293 cells subcloned for growth in suspension culture, Graham et al., J. Gen. Virol., 36:59 (1977)); Chinese hamster ovary cells/DHFR (CHO, Urlaub and Chasin, Proc. Natl. Acad. Sci. USA, 77:4216 (1980)); mouse sertoli cells (TM4, Mather, Biol. Reprod., 23:243-251 (1980)); human lung cells (W138, ATCC CCL 75); human liver cells (Hep G2, HB 8065); and mouse mammary tumor (MMT 060562, ATCC CCL51). The selection of the appropriate host cell is deemed to be within the skill in the art.

3. Selection and Use of a Replicable Vector

The nucleic acid (e.g., cDNA or genomic DNA) encoding PRO may be inserted into a replicable vector for cloning (amplification of the DNA) or for expression. Various vectors are publicly available. The vector may, for example, be in the form of a plasmid, cosmid, viral particle, or phage. The appropriate nucleic acid sequence may be inserted into the vector by a variety of procedures. In general, DNA is inserted into an appropriate restriction endonuclease site(s) using techniques known in the art. Vector components generally include, but are not limited to, one or more of a signal sequence, an origin of replication, one or more marker genes, an enhancer element, a promoter, and a transcription termination

sequence. Construction of suitable vectors containing one or more of these components employs standard ligation techniques which are known to the skilled artisan.

The PRO may be produced recombinantly not only directly, but also as a fusion polypeptide with a heterologous polypeptide, which may be a signal sequence or other polypeptide having a specific cleavage site at the N-terminus of the mature protein or polypeptide. In general, the signal sequence may be a component of the vector, or it may be a part of the PRO-encoding DNA that is inserted into the vector. The signal sequence may be a prokaryotic signal sequence selected, for example, from the group of the alkaline phosphatase, penicillinase, lpp, or heat-stable enterotoxin II leaders. For yeast secretion the signal sequence may be, e.g., the yeast invertase leader, alpha factor leader (including *Saccharomyces* and *Kluyveromyces* α -factor leaders, the latter described in U.S. Patent No. 5,010,182), or acid phosphatase leader, the *C. albicans* glucoamylase leader (EP 362,179 published 4 April 1990), or the signal described in WO 90/13646 published 15 November 1990. In mammalian cell expression, mammalian signal sequences may be used to direct secretion of the protein, such as signal sequences from secreted polypeptides of the same or related species, as well as viral secretory leaders.

Both expression and cloning vectors contain a nucleic acid sequence that enables the vector to replicate in one or more selected host cells. Such sequences are well known for a variety of bacteria, yeast, and viruses. The origin of replication from the plasmid pBR322 is suitable for most Gram-negative bacteria, the 2 μ plasmid origin is suitable for yeast, and various viral origins (SV40, polyoma, adenovirus, VSV or BPV) are useful for cloning vectors in mammalian cells.

Expression and cloning vectors will typically contain a selection gene, also termed a selectable marker. Typical selection genes encode proteins that (a) confer resistance to antibiotics or other toxins, e.g., ampicillin, neomycin, methotrexate, or tetracycline, (b) complement auxotrophic deficiencies, or (c) supply critical nutrients not available from complex media, e.g., the gene encoding D-alanine racemase for *Bacilli*.

An example of suitable selectable markers for mammalian cells are those that enable the identification of cells competent to take up the PRO-encoding nucleic acid, such as DHFR or thymidine kinase. An appropriate host cell when wild-type DHFR is employed is the CHO cell line deficient in DHFR activity, prepared and propagated as described by Urlaub et al., Proc. Natl. Acad. Sci. USA, 77:4216 (1980).

A suitable selection gene for use in yeast is the *trp1* gene present in the yeast plasmid YRp7 [Stinchcomb et al., Nature, 282:39 (1979); Kingsman et al., Gene, 7:141 (1979); Tschemper et al., Gene, 10:157 (1980)].

The *trp1* gene provides a selection marker for a mutant strain of yeast lacking the ability to grow in tryptophan, for example, ATCC No. 44076 or PEP4-1 [Jones, Genetics, 85:12 (1977)].

Expression and cloning vectors usually contain a promoter operably linked to the PRO-encoding nucleic acid sequence to direct mRNA synthesis. Promoters recognized by a variety of potential host cells are well known. Promoters suitable for use with prokaryotic hosts include the β -lactamase and lactose promoter systems [Chang et al., Nature, 275:615 (1978); Goeddel et al., Nature, 281:544 (1979)], alkaline phosphatase, a tryptophan (*trp*) promoter system [Goeddel, Nucleic Acids Res., 8:4057 (1980); EP 36,776], and hybrid promoters such as the *tac* promoter [deBoer et al., Proc. Natl. Acad. Sci. USA, 80:21-25 (1983)]. Promoters for use in bacterial systems also will contain a Shine-Dalgarno (S.D.) sequence operably linked to the DNA encoding PRO.

Examples of suitable promoting sequences for use with yeast hosts include the promoters for 3-phosphoglycerate kinase [Hitzeman et al., J. Biol. Chem., 255:2073 (1980)] or other glycolytic enzymes [Hess et al., J. Adv. Enzyme Reg., 7:149 (1968); Holland, Biochemistry, 17:4900 (1978)], such as enolase, glyceraldehyde-3-phosphate dehydrogenase, hexokinase, pyruvate decarboxylase, phosphofructokinase, glucose-6-phosphate isomerase, 3-phosphoglycerate mutase, pyruvate kinase, triosephosphate isomerase, phosphoglucose isomerase, and glucokinase.

Other yeast promoters, which are inducible promoters having the additional advantage of transcription controlled by growth conditions, are the promoter regions for alcohol dehydrogenase 2, isocytichrome C, acid phosphatase, degradative enzymes associated with nitrogen metabolism, metallothionein, glyceraldehyde-3-phosphate dehydrogenase, and enzymes responsible for maltose and galactose utilization. Suitable vectors and promoters for use in yeast expression are further described in EP 73,657.

PRO transcription from vectors in mammalian host cells is controlled, for example, by promoters obtained from the genomes of viruses such as polyoma virus, fowlpox virus (UK 2,211,504 published 5 July 1989), adenovirus (such as Adenovirus 2), bovine papilloma virus, avian sarcoma virus, cytomegalovirus, a retrovirus, hepatitis-B virus and Simian Virus 40 (SV40), from heterologous mammalian promoters, e.g., the actin promoter or an immunoglobulin promoter, and from heat-shock promoters, provided such promoters are compatible with the host cell systems.

Transcription of a DNA encoding the PRO by higher eukaryotes may be increased by inserting an enhancer sequence into the vector. Enhancers are cis-acting elements of DNA, usually about from 10 to 300 bp, that act on a promoter to increase its transcription. Many enhancer sequences are now known from mammalian genes (globin, elastase, albumin, α -fetoprotein, and insulin). Typically, however, one will use an enhancer from a eukaryotic cell virus. Examples include the SV40 enhancer on the late side of the replication origin (bp 100-270), the cytomegalovirus early promoter enhancer, the polyoma enhancer on the late side of the replication origin, and adenovirus enhancers. The enhancer may be spliced into the vector at a position 5' or 3' to the PRO coding sequence, but is preferably located at a site 5' from the promoter.

Expression vectors used in eukaryotic host cells (yeast, fungi, insect, plant, animal, human, or nucleated cells from other multicellular organisms) will also contain sequences necessary for the termination of transcription and for stabilizing the mRNA. Such sequences are commonly available from the 5' and, occasionally 3', untranslated regions of eukaryotic or viral DNAs or cDNAs. These regions contain nucleotide segments transcribed as polyadenylated fragments in the untranslated portion of the mRNA encoding PRO.

Still other methods, vectors, and host cells suitable for adaptation to the synthesis of PRO in recombinant vertebrate cell culture are described in Gething et al., Nature, 293:620-625 (1981); Mantei et al., Nature, 281:40-46 (1979); EP 117,060; and EP 117,058.

4. Detecting Gene Amplification/Expression

Gene amplification and/or expression may be measured in a sample directly, for example, by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA [Thomas, Proc. Natl. Acad. Sci. USA, 77:5201-5205 (1980)], dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be

employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes. The antibodies in turn may be labeled and the assay may be carried out where the duplex is bound to a surface, so that upon the formation of duplex on the surface, the presence of antibody bound to the duplex can be detected.

Gene expression, alternatively, may be measured by immunological methods, such as immunohistochemical staining of cells or tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence PRO polypeptide or against a synthetic peptide based on the DNA sequences provided herein or against exogenous sequence fused to PRO DNA and encoding a specific antibody epitope.

5. Purification of Polypeptide

Forms of PRO may be recovered from culture medium or from host cell lysates. If membrane-bound, it can be released from the membrane using a suitable detergent solution (e.g. Triton-X 100) or by enzymatic cleavage. Cells employed in expression of PRO can be disrupted by various physical or chemical means, such as freeze-thaw cycling, sonication, mechanical disruption, or cell lysing agents.

It may be desired to purify PRO from recombinant cell proteins or polypeptides. The following procedures are exemplary of suitable purification procedures: by fractionation on an ion-exchange column; ethanol precipitation; reverse phase HPLC; chromatography on silica or on a cation-exchange resin such as DEAE; chromatofocusing; SDS-PAGE; ammonium sulfate precipitation; gel filtration using, for example, Sephadex G-75; protein A Sepharose columns to remove contaminants such as IgG; and metal chelating columns to bind epitope-tagged forms of the PRO. Various methods of protein purification may be employed and such methods are known in the art and described for example in Deutscher, Methods in Enzymology, 182 (1990); Scopes, Protein Purification: Principles and Practice, Springer-Verlag, New York (1982). The purification step(s) selected will depend, for example, on the nature of the production process used and the particular PRO produced.

E. Tissue Distribution

The location of tissues expressing the PRO can be identified by determining mRNA expression in various human tissues. The location of such genes provides information about which tissues are most likely to be affected by the stimulating and inhibiting activities of the PRO polypeptides. The location of a gene in a specific tissue also provides sample tissue for the activity blocking assays discussed below.

As noted before, gene expression in various tissues may be measured by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA (Thomas, *Proc. Natl. Acad. Sci. USA*, 77:5201-5205 [1980]), dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes.

Gene expression in various tissues, alternatively, may be measured by immunological methods, such as immunohistochemical staining of tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining

and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence of a PRO polypeptide or against a synthetic peptide based on the DNA sequences encoding the PRO polypeptide or against an exogenous sequence fused to a DNA encoding a PRO polypeptide and encoding a specific antibody epitope. General techniques for generating antibodies, and special protocols for Northern blotting and *in situ* hybridization are provided below.

F. Antibody Binding Studies

The activity of the PRO polypeptides can be further verified by antibody binding studies, in which the ability of anti-PRO antibodies to inhibit the effect of the PRO polypeptides, respectively, on tissue cells is tested. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies, the preparation of which will be described hereinbelow.

Antibody binding studies may be carried out in any known assay method, such as competitive binding assays, direct and indirect sandwich assays, and immunoprecipitation assays. Zola, *Monoclonal Antibodies: A Manual of Techniques*, pp.147-158 (CRC Press, Inc., 1987).

Competitive binding assays rely on the ability of a labeled standard to compete with the test sample analyte for binding with a limited amount of antibody. The amount of target protein in the test sample is inversely proportional to the amount of standard that becomes bound to the antibodies. To facilitate determining the amount of standard that becomes bound, the antibodies preferably are insolubilized before or after the competition, so that the standard and analyte that are bound to the antibodies may conveniently be separated from the standard and analyte which remain unbound.

Sandwich assays involve the use of two antibodies, each capable of binding to a different immunogenic portion, or epitope, of the protein to be detected. In a sandwich assay, the test sample analyte is bound by a first antibody which is immobilized on a solid support, and thereafter a second antibody binds to the analyte, thus forming an insoluble three-part complex. See, *e.g.*, US Pat No. 4,376,110. The second antibody may itself be labeled with a detectable moiety (direct sandwich assays) or may be measured using an anti-immunoglobulin antibody that is labeled with a detectable moiety (indirect sandwich assay). For example, one type of sandwich assay is an ELISA assay, in which case the detectable moiety is an enzyme.

For immunohistochemistry, the tissue sample may be fresh or frozen or may be embedded in paraffin and fixed with a preservative such as formalin, for example.

G. Cell-Based Assays

Cell-based assays and animal models for immune related diseases can be used to further understand the relationship between the genes and polypeptides identified herein and the development and pathogenesis of immune related disease.

In a different approach, cells of a cell type known to be involved in a particular immune related disease are transfected with the cDNAs described herein, and the ability of these cDNAs to stimulate or inhibit immune function is analyzed. Suitable cells can be transfected with the desired gene, and monitored for immune function activity. Such transfected cell lines can then be used to test the ability of poly- or monoclonal antibodies or antibody compositions to inhibit or stimulate immune function, for example to modulate NK cell proliferation or inflammatory cell infiltration. Cells transfected with the coding sequences

of the genes identified herein can further be used to identify drug candidates for the treatment of immune related diseases.

In addition, primary cultures derived from transgenic animals (as described below) can be used in the cell-based assays herein, although stable cell lines are preferred. Techniques to derive continuous cell lines from transgenic animals are well known in the art (see, *e.g.*, Small *et al.*, *Mol. Cell. Biol.* 5: 642-648 [1985]).

The use of an agonist stimulating compound has also been validated experimentally. Activation of 4-1BB by treatment with an agonist anti-4-1BB antibody enhances eradication of tumors. Hellstrom, I. and Hellstrom, K. E., *Crit. Rev. Immunol.* (1998) 18:1. Immunoadjuvant therapy for treatment of tumors, described in more detail below, is another example of the use of the stimulating compounds of the invention.

Alternatively, an immune stimulating or enhancing effect can also be achieved by administration of a PRO which has vascular permeability enhancing properties. Enhanced vascular permeability would be beneficial to disorders which can be attenuated by local infiltration of immune cells (*e.g.*, NK cells, monocytes/macrophages, eosinophils, PMNs) and inflammation.

On the other hand, PRO polypeptides, as well as other compounds of the invention, which are direct inhibitors of NK cell proliferation/activation, lymphokine secretion, and/or vascular permeability can be directly used to suppress the immune response. These compounds are useful to reduce the degree of the immune response and to treat immune related diseases characterized by a hyperactive, superoptimal, or autoimmune response. The use of compound which suppress vascular permeability would be expected to reduce inflammation. Such uses would be beneficial in treating conditions associated with excessive inflammation.

Alternatively, compounds, *e.g.*, antibodies, which bind to stimulating PRO polypeptides and block the stimulating effect of these molecules produce a net inhibitory effect and can be used to suppress the NK cell mediated immune response by inhibiting NK cell proliferation/activation and/or lymphokine secretion. Blocking the stimulating effect of the polypeptides suppresses the immune response of the mammal.

H. Animal Models

The results of the cell based *in vitro* assays can be further verified using *in vivo* animal models and assays for NK cell function. A variety of well known animal models can be used to further understand the role of the genes identified herein in the development and pathogenesis of immune related disease, and to test the efficacy of candidate therapeutic agents, including antibodies, and other antagonists of the native polypeptides, including small molecule antagonists. The *in vivo* nature of such models makes them predictive of responses in human patients. Animal models of immune related diseases include both non-recombinant and recombinant (transgenic) animals. Non-recombinant animal models include, for example, rodent, *e.g.*, murine models. Such models can be generated by introducing cells into syngeneic mice using standard techniques, *e.g.*, subcutaneous injection, tail vein injection, spleen implantation, intraperitoneal implantation, implantation under the renal capsule, *etc.*

Graft-versus-host disease occurs when immunocompetent cells are transplanted into immunosuppressed or tolerant patients. The donor cells recognize and respond to host antigens. The response can vary from life threatening severe inflammation to mild cases of diarrhea and weight loss.

Graft-versus-host disease models provide a means of assessing NK cell reactivity against MHC antigens and minor transplant antigens. A suitable procedure is described in detail in *Current Protocols in Immunology*, above, unit 4.3.

Contact hypersensitivity is a simple delayed type hypersensitivity *in vivo* assay of cell mediated immune function. In this procedure, cutaneous exposure to exogenous haptens which gives rise to a delayed type hypersensitivity reaction which is measured and quantitated. Contact sensitivity involves an initial sensitizing phase followed by an elicitation phase. The elicitation phase occurs when the T lymphocytes encounter an antigen to which they have had previous contact. Swelling and inflammation occur, making this an excellent model of human allergic contact dermatitis. A suitable procedure is described in detail in *Current Protocols in Immunology*, Eds. J. E. Cologan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach and W. Strober, John Wiley & Sons, Inc., 1994, unit 4.2. See also Grabbe, S. and Schwarz, T, *Immun. Today* 19 (1): 37-44 (1998)

Recombinant (transgenic) animal models can be engineered by introducing the coding portion of the genes identified herein into the genome of animals of interest, using standard techniques for producing transgenic animals. Animals that can serve as a target for transgenic manipulation include, without limitation, mice, rats, rabbits, guinea pigs, sheep, goats, pigs, and non-human primates, *e.g.*, baboons, chimpanzees and monkeys. Techniques known in the art to introduce a transgene into such animals include pronucleic microinjection (Hoppe and Wanger, U.S. Patent No. 4,873,191); retrovirus-mediated gene transfer into germ lines (*e.g.*, Van der Putten *et al.*, *Proc. Natl. Acad. Sci. USA* 82, 6148-615 [1985]); gene targeting in embryonic stem cells (Thompson *et al.*, *Cell* 56, 313-321 [1989]); electroporation of embryos (Lo, *Mol. Cel. Biol.* 3, 1803-1814 [1983]); sperm-mediated gene transfer (Lavitrano *et al.*, *Cell* 57, 717-73 [1989]). For review, see, for example, U.S. Patent No. 4,736,866.

For the purpose of the present invention, transgenic animals include those that carry the transgene only in part of their cells ("mosaic animals"). The transgene can be integrated either as a single transgene, or in concatamers, *e.g.*, head-to-head or head-to-tail tandems. Selective introduction of a transgene into a particular cell type is also possible by following, for example, the technique of Lasko *et al.*, *Proc. Natl. Acad. Sci. USA* 89, 6232-636 (1992).

The expression of the transgene in transgenic animals can be monitored by standard techniques. For example, Southern blot analysis or PCR amplification can be used to verify the integration of the transgene. The level of mRNA expression can then be analyzed using techniques such as *in situ* hybridization, Northern blot analysis, PCR, or immunocytochemistry.

The animals may be further examined for signs of immune disease pathology, for example by histological examination to determine infiltration of immune cells into specific tissues. Blocking experiments can also be performed in which the transgenic animals are treated with the compounds of the invention to determine the extent of the NK cell proliferation, stimulation or inhibition of the compounds. In these experiments, blocking antibodies which bind to the PRO polypeptide, prepared as described above, are administered to the animal and the effect on immune function is determined.

Alternatively, "knock out" animals can be constructed which have a defective or altered gene encoding a polypeptide identified herein, as a result of homologous recombination between the endogenous gene encoding the polypeptide and altered genomic DNA encoding the same polypeptide introduced into an

embryonic cell of the animal. For example, cDNA encoding a particular polypeptide can be used to clone genomic DNA encoding that polypeptide in accordance with established techniques. A portion of the genomic DNA encoding a particular polypeptide can be deleted or replaced with another gene, such as a gene encoding a selectable marker which can be used to monitor integration. Typically, several kilobases of unaltered flanking DNA (both at the 5' and 3' ends) are included in the vector [see *e.g.*, Thomas and Capecchi, *Cell*, 51:503 (1987) for a description of homologous recombination vectors]. The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced DNA has homologously recombined with the endogenous DNA are selected [see *e.g.*, Li *et al.*, *Cell*, 69:915 (1992)]. The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse or rat) to form aggregation chimeras [see *e.g.*, Bradley, in *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, E. J. Robertson, ed. (IRL, Oxford, 1987), pp. 113-152]. A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term to create a "knock out" animal. Progeny harboring the homologously recombined DNA in their germ cells can be identified by standard techniques and used to breed animals in which all cells of the animal contain the homologously recombined DNA. Knockout animals can be characterized for instance, for their ability to defend against certain pathological conditions and for their development of pathological conditions due to absence of the polypeptide.

I. ImmunoAdjuvant Therapy

In one embodiment, the immunostimulating compounds of the invention can be used in immunoadjuvant therapy for the treatment of tumors (cancer). It is now well established that NK cells recognize human tumor specific antigens. One group of tumor antigens, encoded by the MAGE, BAGE and GAGE families of genes, are silent in all adult normal tissues, but are expressed in significant amounts in tumors, such as melanomas, lung tumors, head and neck tumors, and bladder carcinomas. DeSmet, C. *et al.*, (1996) *Proc. Natl. Acad. Sci. USA*, 93:7149. It has been shown that stimulation of immune cells induces tumor regression and an antitumor response both *in vitro* and *in vivo*. Melero, I. *et al.*, *Nature Medicine* (1997) 3:682; Kwon, E. D. *et al.*, *Proc. Natl. Acad. Sci. USA* (1997) 94: 8099; Lynch, D. H. *et al.*, *Nature Medicine* (1997) 3:625; Finn, O. J. and Lotze, M. T., *J. Immunol.* (1998) 21:114. The stimulatory compounds of the invention can be administered as adjuvants, alone or together with a growth regulating agent, cytotoxic agent or chemotherapeutic agent, to stimulate NK cell proliferation/activation and an antitumor response to tumor antigens. The growth regulating, cytotoxic, or chemotherapeutic agent may be administered in conventional amounts using known administration regimes. Immunostimulating activity by the compounds of the invention allows reduced amounts of the growth regulating, cytotoxic, or chemotherapeutic agents thereby potentially lowering the toxicity to the patient.

J. Screening Assays for Drug Candidates

Screening assays for drug candidates are designed to identify compounds that bind to or complex with the polypeptides encoded by the genes identified herein or a biologically active fragment thereof, or otherwise interfere with the interaction of the encoded polypeptides with other cellular proteins. Such screening assays will include assays amenable to high-throughput screening of chemical libraries, making them particularly suitable for identifying small molecule drug candidates. Small molecules contemplated include synthetic organic or inorganic compounds, including peptides, preferably soluble peptides,

(poly)peptide-immunoglobulin fusions, and, in particular, antibodies including, without limitation, poly- and monoclonal antibodies and antibody fragments, single-chain antibodies, anti-idiotypic antibodies, and chimeric or humanized versions of such antibodies or fragments, as well as human antibodies and antibody fragments. The assays can be performed in a variety of formats, including protein-protein binding assays, biochemical screening assays, immunoassays and cell based assays, which are well characterized in the art. All assays are common in that they call for contacting the drug candidate with a polypeptide encoded by a nucleic acid identified herein under conditions and for a time sufficient to allow these two components to interact.

In binding assays, the interaction is binding and the complex formed can be isolated or detected in the reaction mixture. In a particular embodiment, the polypeptide encoded by the gene identified herein or the drug candidate is immobilized on a solid phase, *e.g.*, on a microtiter plate, by covalent or non-covalent attachments. Non-covalent attachment generally is accomplished by coating the solid surface with a solution of the polypeptide and drying. Alternatively, an immobilized antibody, *e.g.*, a monoclonal antibody, specific for the polypeptide to be immobilized can be used to anchor it to a solid surface. The assay is performed by adding the non-immobilized component, which may be labeled by a detectable label, to the immobilized component, *e.g.*, the coated surface containing the anchored component. When the reaction is complete, the non-reacted components are removed, *e.g.*, by washing, and complexes anchored on the solid surface are detected. When the originally non-immobilized component carries a detectable label, the detection of label immobilized on the surface indicates that complexing occurred. Where the originally non-immobilized component does not carry a label, complexing can be detected, for example, by using a labelled antibody specifically binding the immobilized complex.

If the candidate compound interacts with but does not bind to a particular protein encoded by a gene identified herein, its interaction with that protein can be assayed by methods well known for detecting protein-protein interactions. Such assays include traditional approaches, such as, cross-linking, co-immunoprecipitation, and co-purification through gradients or chromatographic columns. In addition, protein-protein interactions can be monitored by using a yeast-based genetic system described by Fields and co-workers [Fields and Song, *Nature (London)* **340**, 245-246 (1989); Chien *et al.*, *Proc. Natl. Acad. Sci. USA* **88**, 9578-9582 (1991)] as disclosed by Chevray and Nathans, *Proc. Natl. Acad. Sci. USA* **89**, 5789-5793 (1991). Many transcriptional activators, such as yeast GAL4, consist of two physically discrete modular domains, one acting as the DNA-binding domain, while the other one functioning as the transcription activation domain. The yeast expression system described in the foregoing publications (generally referred to as the "two-hybrid system") takes advantage of this property, and employs two hybrid proteins, one in which the target protein is fused to the DNA-binding domain of GAL4, and another, in which candidate activating proteins are fused to the activation domain. The expression of a GAL1-*lacZ* reporter gene under control of a GAL4-activated promoter depends on reconstitution of GAL4 activity via protein-protein interaction. Colonies containing interacting polypeptides are detected with a chromogenic substrate for β -galactosidase. A complete kit (MATCHMAKERTM) for identifying protein-protein interactions between two specific proteins using the two-hybrid technique is commercially available from Clontech. This system can also be extended to map protein domains involved in specific protein interactions as well as to pinpoint amino acid residues that are crucial for these interactions.

In order to find compounds that interfere with the interaction of a gene identified herein and other intra- or extracellular components can be tested, a reaction mixture is usually prepared containing the product of the gene and the intra- or extracellular component under conditions and for a time allowing for the interaction and binding of the two products. To test the ability of a test compound to inhibit binding, the reaction is run in the absence and in the presence of the test compound. In addition, a placebo may be added to a third reaction mixture, to serve as positive control. The binding (complex formation) between the test compound and the intra- or extracellular component present in the mixture is monitored as described above. The formation of a complex in the control reaction(s) but not in the reaction mixture containing the test compound indicates that the test compound interferes with the interaction of the test compound and its reaction partner.

K. Compositions and Methods for the Treatment of Immune Related Diseases

The compositions useful in the treatment of immune related diseases include, without limitation, proteins, antibodies, small organic molecules, peptides, phosphopeptides, antisense and ribozyme molecules, triple helix molecules, *etc.* that inhibit or stimulate immune function, for example, NK cell proliferation/activation, lymphokine release, or immune cell infiltration.

For example, antisense RNA and RNA molecules act to directly block the translation of mRNA by hybridizing to targeted mRNA and preventing protein translation. When antisense DNA is used, oligodeoxyribonucleotides derived from the translation initiation site, *e.g.*, between about -10 and +10 positions of the target gene nucleotide sequence, are preferred.

Ribozymes are enzymatic RNA molecules capable of catalyzing the specific cleavage of RNA. Ribozymes act by sequence-specific hybridization to the complementary target RNA, followed by endonucleolytic cleavage. Specific ribozyme cleavage sites within a potential RNA target can be identified by known techniques. For further details see, *e.g.*, Rossi, *Current Biology* 4, 469-471 (1994), and PCT publication No. WO 97/33551 (published September 18, 1997).

Nucleic acid molecules in triple helix formation used to inhibit transcription should be single-stranded and composed of deoxynucleotides. The base composition of these oligonucleotides is designed such that it promotes triple helix formation via Hoogsteen base pairing rules, which generally require sizeable stretches of purines or pyrimidines on one strand of a duplex. For further details see, *e.g.*, PCT publication No. WO 97/33551, *supra*.

These molecules can be identified by any or any combination of the screening assays discussed above and/or by any other screening techniques well known for those skilled in the art.

L. Anti-PRO Antibodies

The present invention further provides anti-PRO antibodies. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies.

1. Polyclonal Antibodies

The anti-PRO antibodies may comprise polyclonal antibodies. Methods of preparing polyclonal antibodies are known to the skilled artisan. Polyclonal antibodies can be raised in a mammal, for example, by one or more injections of an immunizing agent and, if desired, an adjuvant. Typically, the immunizing agent and/or adjuvant will be injected in the mammal by multiple subcutaneous or intraperitoneal injections.

The immunizing agent may include the PRO polypeptide or a fusion protein thereof. It may be useful to conjugate the immunizing agent to a protein known to be immunogenic in the mammal being immunized. Examples of such immunogenic proteins include but are not limited to keyhole limpet hemocyanin, serum albumin, bovine thyroglobulin, and soybean trypsin inhibitor. Examples of adjuvants which may be employed include Freund's complete adjuvant and MPL-TDM adjuvant (monophosphoryl Lipid A, synthetic trehalose dicorynomycolate). The immunization protocol may be selected by one skilled in the art without undue experimentation.

2. Monoclonal Antibodies

The anti-PRO antibodies may, alternatively, be monoclonal antibodies. Monoclonal antibodies may be prepared using hybridoma methods, such as those described by Kohler and Milstein, Nature, 256:495 (1975). In a hybridoma method, a mouse, hamster, or other appropriate host animal, is typically immunized with an immunizing agent to elicit lymphocytes that produce or are capable of producing antibodies that will specifically bind to the immunizing agent. Alternatively, the lymphocytes may be immunized *in vitro*.

The immunizing agent will typically include the PRO polypeptide or a fusion protein thereof. Generally, either peripheral blood lymphocytes ("PBLs") are used if cells of human origin are desired, or spleen cells or lymph node cells are used if non-human mammalian sources are desired. The lymphocytes are then fused with an immortalized cell line using a suitable fusing agent, such as polyethylene glycol, to form a hybridoma cell [Goding, Monoclonal Antibodies: Principles and Practice, Academic Press, (1986) pp. 59-103]. Immortalized cell lines are usually transformed mammalian cells, particularly myeloma cells of rodent, bovine and human origin. Usually, rat or mouse myeloma cell lines are employed. The hybridoma cells may be cultured in a suitable culture medium that preferably contains one or more substances that inhibit the growth or survival of the unfused, immortalized cells. For example, if the parental cells lack the enzyme hypoxanthine guanine phosphoribosyl transferase (HGPRT or HPRT), the culture medium for the hybridomas typically will include hypoxanthine, aminopterin, and thymidine ("HAT medium"), which substances prevent the growth of HGPRT-deficient cells.

Preferred immortalized cell lines are those that fuse efficiently, support stable high level expression of antibody by the selected antibody-producing cells, and are sensitive to a medium such as HAT medium. More preferred immortalized cell lines are murine myeloma lines, which can be obtained, for instance, from the Salk Institute Cell Distribution Center, San Diego, California and the American Type Culture Collection, Manassas, Virginia. Human myeloma and mouse-human heteromyeloma cell lines also have been described for the production of human monoclonal antibodies [Kozbor, J. Immunol., 133:3001 (1984); Brodeur et al., Monoclonal Antibody Production Techniques and Applications, Marcel Dekker, Inc., New York, (1987) pp. 51-63].

The culture medium in which the hybridoma cells are cultured can then be assayed for the presence of monoclonal antibodies directed against PRO. Preferably, the binding specificity of monoclonal antibodies produced by the hybridoma cells is determined by immunoprecipitation or by an *in vitro* binding assay, such as radioimmunoassay (RIA) or enzyme-linked immunoabsorbent assay (ELISA). Such techniques and assays are known in the art. The binding affinity of the monoclonal antibody can, for example, be determined by the Scatchard analysis of Munson and Pollard, Anal. Biochem., 107:220 (1980).

After the desired hybridoma cells are identified, the clones may be subcloned by limiting dilution procedures and grown by standard methods [Goding, *supra*]. Suitable culture media for this purpose include, for example, Dulbecco's Modified Eagle's Medium and RPMI-1640 medium. Alternatively, the hybridoma cells may be grown *in vivo* as ascites in a mammal.

5 The monoclonal antibodies secreted by the subclones may be isolated or purified from the culture medium or ascites fluid by conventional immunoglobulin purification procedures such as, for example, protein A-Sepharose, hydroxylapatite chromatography, gel electrophoresis, dialysis, or affinity chromatography.

10 The monoclonal antibodies may also be made by recombinant DNA methods, such as those described in U.S. Patent No. 4,816,567. DNA encoding the monoclonal antibodies of the invention can be readily isolated and sequenced using conventional procedures (e.g., by using oligonucleotide probes that are capable of binding specifically to genes encoding the heavy and light chains of murine antibodies). The hybridoma cells of the invention serve as a preferred source of such DNA. Once isolated, the DNA may be placed into expression vectors, which are then transfected into host cells such as simian COS cells, Chinese hamster ovary (CHO) cells, or myeloma cells that do not otherwise produce immunoglobulin protein, to obtain the synthesis of monoclonal antibodies in the recombinant host cells. The DNA also may be modified, for example, by substituting the coding sequence for human heavy and light chain constant domains in place of the homologous murine sequences [U.S. Patent No. 4,816,567; Morrison et al., *supra*] or by covalently joining to the immunoglobulin coding sequence all or part of the coding sequence for a non-immunoglobulin polypeptide. Such a non-immunoglobulin polypeptide can be substituted for the constant domains of an antibody of the invention, or can be substituted for the variable domains of one antigen-combining site of an antibody of the invention to create a chimeric bivalent antibody.

25 The antibodies may be monovalent antibodies. Methods for preparing monovalent antibodies are well known in the art. For example, one method involves recombinant expression of immunoglobulin light chain and modified heavy chain. The heavy chain is truncated generally at any point in the Fc region so as to prevent heavy chain crosslinking. Alternatively, the relevant cysteine residues are substituted with another amino acid residue or are deleted so as to prevent crosslinking.

30 *In vitro* methods are also suitable for preparing monovalent antibodies. Digestion of antibodies to produce fragments thereof, particularly, Fab fragments, can be accomplished using routine techniques known in the art.

3. Human and Humanized Antibodies

35 The anti-PRO antibodies of the invention may further comprise humanized antibodies or human antibodies. Humanized forms of non-human (e.g., murine) antibodies are chimeric immunoglobulins, immunoglobulin chains or fragments thereof (such as Fv, Fab, Fab', F(ab')₂ or other antigen-binding subsequences of antibodies) which contain minimal sequence derived from non-human immunoglobulin. Humanized antibodies include human immunoglobulins (recipient antibody) in which residues from a complementary determining region (CDR) of the recipient are replaced by residues from a CDR of a non-human species (donor antibody) such as mouse, rat or rabbit having the desired specificity, affinity and capacity. In some instances, Fv framework residues of the human immunoglobulin are replaced by corresponding non-human residues. Humanized antibodies may also comprise residues which are found

neither in the recipient antibody nor in the imported CDR or framework sequences. In general, the humanized antibody will comprise substantially all of at least one, and typically two, variable domains, in which all or substantially all of the CDR regions correspond to those of a non-human immunoglobulin and all or substantially all of the FR regions are those of a human immunoglobulin consensus sequence. The humanized antibody optimally also will comprise at least a portion of an immunoglobulin constant region (Fc), typically that of a human immunoglobulin [Jones et al., *Nature*, 321:522-525 (1986); Riechmann et al., *Nature*, 332:323-329 (1988); and Presta, *Curr. Op. Struct. Biol.*, 2:593-596 (1992)].

Methods for humanizing non-human antibodies are well known in the art. Generally, a humanized antibody has one or more amino acid residues introduced into it from a source which is non-human. These non-human amino acid residues are often referred to as "import" residues, which are typically taken from an "import" variable domain. Humanization can be essentially performed following the method of Winter and co-workers [Jones et al., *Nature*, 321:522-525 (1986); Riechmann et al., *Nature*, 332:323-327 (1988); Verhoeven et al., *Science*, 239:1534-1536 (1988)], by substituting rodent CDRs or CDR sequences for the corresponding sequences of a human antibody. Accordingly, such "humanized" antibodies are chimeric antibodies (U.S. Patent No. 4,816,567), wherein substantially less than an intact human variable domain has been substituted by the corresponding sequence from a non-human species. In practice, humanized antibodies are typically human antibodies in which some CDR residues and possibly some FR residues are substituted by residues from analogous sites in rodent antibodies.

Human antibodies can also be produced using various techniques known in the art, including phage display libraries [Hoogenboom and Winter, *J. Mol. Biol.*, 227:381 (1991); Marks et al., *J. Mol. Biol.*, 222:581 (1991)]. The techniques of Cole et al. and Boerner et al. are also available for the preparation of human monoclonal antibodies (Cole et al., *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, p. 77 (1985) and Boerner et al., *J. Immunol.*, 147(1):86-95 (1991)]. Similarly, human antibodies can be made by introducing of human immunoglobulin loci into transgenic animals, e.g., mice in which the endogenous immunoglobulin genes have been partially or completely inactivated. Upon challenge, human antibody production is observed, which closely resembles that seen in humans in all respects, including gene rearrangement, assembly, and antibody repertoire. This approach is described, for example, in U.S. Patent Nos. 5,545,807; 5,545,806; 5,569,825; 5,625,126; 5,633,425; 5,661,016, and in the following scientific publications: Marks *et al.*, *Bio/Technology* 10, 779-783 (1992); Lonberg *et al.*, *Nature* 368 856-859 (1994); Morrison, *Nature* 368, 812-13 (1994); Fishwild *et al.*, *Nature Biotechnology* 14, 845-51 (1996); Neuberger, *Nature Biotechnology* 14, 826 (1996); Lonberg and Huszar, *Intern. Rev. Immunol.* 13 65-93 (1995).

The antibodies may also be affinity matured using known selection and/or mutagenesis methods as described above. Preferred affinity matured antibodies have an affinity which is five times, more preferably 10 times, even more preferably 20 or 30 times greater than the starting antibody (generally murine, humanized or human) from which the matured antibody is prepared.

4. Bispecific Antibodies

Bispecific antibodies are monoclonal, preferably human or humanized, antibodies that have binding specificities for at least two different antigens. In the present case, one of the binding specificities is for the

PRO, the other one is for any other antigen, and preferably for a cell-surface protein or receptor or receptor subunit.

Methods for making bispecific antibodies are known in the art. Traditionally, the recombinant production of bispecific antibodies is based on the co-expression of two immunoglobulin heavy-chain/light-chain pairs, where the two heavy chains have different specificities [Milstein and Cuello, Nature, 305:537-539 (1983)]. Because of the random assortment of immunoglobulin heavy and light chains, these hybridomas (quadromas) produce a potential mixture of ten different antibody molecules, of which only one has the correct bispecific structure. The purification of the correct molecule is usually accomplished by affinity chromatography steps. Similar procedures are disclosed in WO 93/08829, published 13 May 1993, and in Traunecker et al., EMBO J., 10:3655-3659 (1991).

Antibody variable domains with the desired binding specificities (antibody-antigen combining sites) can be fused to immunoglobulin constant domain sequences. The fusion preferably is with an immunoglobulin heavy-chain constant domain, comprising at least part of the hinge, CH2, and CH3 regions. It is preferred to have the first heavy-chain constant region (CH1) containing the site necessary for light-chain binding present in at least one of the fusions. DNAs encoding the immunoglobulin heavy-chain fusions and, if desired, the immunoglobulin light chain, are inserted into separate expression vectors, and are co-transfected into a suitable host organism. For further details of generating bispecific antibodies see, for example, Suresh et al., Methods in Enzymology, 121:210 (1986).

According to another approach described in WO 96/27011, the interface between a pair of antibody molecules can be engineered to maximize the percentage of heterodimers which are recovered from recombinant cell culture. The preferred interface comprises at least a part of the CH3 region of an antibody constant domain. In this method, one or more small amino acid side chains from the interface of the first antibody molecule are replaced with larger side chains (e.g. tyrosine or tryptophan). Compensatory "cavities" of identical or similar size to the large side chain(s) are created on the interface of the second antibody molecule by replacing large amino acid side chains with smaller ones (e.g. alanine or threonine). This provides a mechanism for increasing the yield of the heterodimer over other unwanted end-products such as homodimers.

Bispecific antibodies can be prepared as full length antibodies or antibody fragments (e.g. F(ab')₂ bispecific antibodies). Techniques for generating bispecific antibodies from antibody fragments have been described in the literature. For example, bispecific antibodies can be prepared using chemical linkage. Brennan *et al.*, Science 229:81 (1985) describe a procedure wherein intact antibodies are proteolytically cleaved to generate F(ab')₂ fragments. These fragments are reduced in the presence of the dithiol complexing agent sodium arsenite to stabilize vicinal dithiols and prevent intermolecular disulfide formation. The Fab' fragments generated are then converted to thionitrobenzoate (TNB) derivatives. One of the Fab'-TNB derivatives is then reconverted to the Fab'-thiol by reduction with mercaptoethylamine and is mixed with an equimolar amount of the other Fab'-TNB derivative to form the bispecific antibody. The bispecific antibodies produced can be used as agents for the selective immobilization of enzymes.

Fab' fragments may be directly recovered from *E. coli* and chemically coupled to form bispecific antibodies. Shalaby *et al.*, J. Exp. Med. 175:217-225 (1992) describe the production of a fully humanized bispecific antibody F(ab')₂ molecule. Each Fab' fragment was separately secreted from *E. coli* and

subjected to directed chemical coupling *in vitro* to form the bispecific antibody. The bispecific antibody thus formed was able to bind to cells overexpressing the ErbB2 receptor and normal human T cells, as well as trigger the lytic activity of human cytotoxic lymphocytes against human breast tumor targets.

Various technique for making and isolating bispecific antibody fragments directly from recombinant cell culture have also been described. For example, bispecific antibodies have been produced using leucine zippers. Kostelny *et al.*, J. Immunol. 148(5):1547-1553 (1992). The leucine zipper peptides from the Fos and Jun proteins were linked to the Fab' portions of two different antibodies by gene fusion. The antibody homodimers were reduced at the hinge region to form monomers and then re-oxidized to form the antibody heterodimers. This method can also be utilized for the production of antibody homodimers. The "diabody" technology described by Hollinger *et al.*, Proc. Natl. Acad. Sci. USA 90:6444-6448 (1993) has provided an alternative mechanism for making bispecific antibody fragments. The fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) by a linker which is too short to allow pairing between the two domains on the same chain. Accordingly, the V_H and V_L domains of one fragment are forced to pair with the complementary V_L and V_H domains of another fragment, thereby forming two antigen-binding sites. Another strategy for making bispecific antibody fragments by the use of single-chain Fv (sFv) dimers has also been reported. See, Gruber *et al.*, J. Immunol. 152:5368 (1994). Antibodies with more than two valencies are contemplated. For example, trispecific antibodies can be prepared. Tutt *et al.*, J. Immunol. 147:60 (1991).

Exemplary bispecific antibodies may bind to two different epitopes on a given PRO polypeptide herein. Alternatively, an anti-PRO polypeptide arm may be combined with an arm which binds to a triggering molecule on a leukocyte such as a T-cell receptor molecule (e.g. CD2, CD3, CD28, or B7), or Fc receptors for IgG (FcγR), such as FcγRI (CD64), FcγRII (CD32) and FcγRIII (CD16) so as to focus cellular defense mechanisms to the cell expressing the particular PRO polypeptide. Bispecific antibodies may also be used to localize cytotoxic agents to cells which express a particular PRO polypeptide. These antibodies possess a PRO-binding arm and an arm which binds a cytotoxic agent or a radionuclide chelator, such as EOTUBE, DPTA, DOTA, or TETA. Another bispecific antibody of interest binds the PRO polypeptide and further binds tissue factor (TF).

5. Heteroconjugate Antibodies

Heteroconjugate antibodies are also within the scope of the present invention. Heteroconjugate antibodies are composed of two covalently joined antibodies. Such antibodies have, for example, been proposed to target immune system cells to unwanted cells [U.S. Patent No. 4,676,980], and for treatment of HIV infection [WO 91/00360; WO 92/200373; EP 03089]. It is contemplated that the antibodies may be prepared *in vitro* using known methods in synthetic protein chemistry, including those involving crosslinking agents. For example, immunotoxins may be constructed using a disulfide exchange reaction or by forming a thioether bond. Examples of suitable reagents for this purpose include iminothiolate and methyl-4-mercaptobutyrimidate and those disclosed, for example, in U.S. Patent No. 4,676,980.

6. Effector Function Engineering

It may be desirable to modify the antibody of the invention with respect to effector function, so as to enhance, *e.g.*, the effectiveness of the antibody in treating cancer. For example, cysteine residue(s) may

be introduced into the Fc region, thereby allowing interchain disulfide bond formation in this region. The homodimeric antibody thus generated may have improved internalization capability and/or increased complement-mediated cell killing and antibody-dependent cellular cytotoxicity (ADCC). See Caron *et al.*, J. Exp Med., 176: 1191-1195 (1992) and Shopes, J. Immunol., 148: 2918-2922 (1992). Homodimeric antibodies with enhanced anti-tumor activity may also be prepared using heterobifunctional cross-linkers as described in Wolff *et al.*, Cancer Research, 53: 2560-2565 (1993). Alternatively, an antibody can be engineered that has dual Fc regions and may thereby have enhanced complement lysis and ADCC capabilities. See Stevenson *et al.*, Anti-Cancer Drug Design, 3: 219-230 (1989).

7. Immunoconjugates

The invention also pertains to immunoconjugates comprising an antibody conjugated to a cytotoxic agent such as a chemotherapeutic agent, toxin (*e.g.*, an enzymatically active toxin of bacterial, fungal, plant, or animal origin, or fragments thereof), or a radioactive isotope (*i.e.*, a radioconjugate).

Chemotherapeutic agents useful in the generation of such immunoconjugates have been described above. Enzymatically active toxins and fragments thereof that can be used include diphtheria A chain, nonbinding active fragments of diphtheria toxin, exotoxin A chain (from *Pseudomonas aeruginosa*), ricin A chain, abrin A chain, modeccin A chain, alpha-sarcin, *Aleurites fordii* proteins, dianthin proteins, *Phytolaca americana* proteins (PAPI, PAPII, and PAP-S), momordica charantia inhibitor, curcin, crotin, sapaonaria officinalis inhibitor, gelonin, mitogellin, restrictocin, phenomycin, enomycin, and the tricothecenes. A variety of radionuclides are available for the production of radioconjugated antibodies. Examples include ^{212}Bi , ^{131}I , ^{131}In , ^{90}Y , and ^{186}Re .

Conjugates of the antibody and cytotoxic agent are made using a variety of bifunctional protein-coupling agents such as N-succinimidyl-3-(2-pyridyldithiol) propionate (SPDP), iminothiolane (IT), bifunctional derivatives of imidoesters (such as dimethyl adipimidate HCL), active esters (such as disuccinimidyl suberate), aldehydes (such as glutaraldehyde), bis-azido compounds (such as bis (p-azidobenzoyl) hexanediamine), bis-diazonium derivatives (such as bis-(p-diazoniumbenzoyl)-ethylenediamine), diisocyanates (such as tolyene 2,6-diisocyanate), and bis-active fluorine compounds (such as 1,5-difluoro-2,4-dinitrobenzene). For example, a ricin immunotoxin can be prepared as described in Vitetta *et al.*, Science, 238: 1098 (1987). Carbon-14-labeled 1-isothiocyanatobenzyl-3-methyldiethylene triaminopentaacetic acid (MX-DTPA) is an exemplary chelating agent for conjugation of radionucleotide to the antibody. See WO94/11026.

In another embodiment, the antibody may be conjugated to a "receptor" (such streptavidin) for utilization in tumor pretargeting wherein the antibody-receptor conjugate is administered to the patient, followed by removal of unbound conjugate from the circulation using a clearing agent and then administration of a "ligand" (*e.g.*, avidin) that is conjugated to a cytotoxic agent (*e.g.*, a radionucleotide).

8. Immunoliposomes

The antibodies disclosed herein may also be formulated as immunoliposomes. Liposomes containing the antibody are prepared by methods known in the art, such as described in Epstein *et al.*, Proc. Natl. Acad. Sci. USA, 82: 3688 (1985); Hwang *et al.*, Proc. Natl. Acad. Sci. USA, 77: 4030 (1980); and U.S. Pat. Nos. 4,485,045 and 4,544,545. Liposomes with enhanced circulation time are disclosed in U.S. Patent No. 5,013,556.

Particularly useful liposomes can be generated by the reverse-phase evaporation method with a lipid composition comprising phosphatidylcholine, cholesterol, and PEG-derivatized phosphatidylethanolamine (PEG-PE). Liposomes are extruded through filters of defined pore size to yield liposomes with the desired diameter. Fab' fragments of the antibody of the present invention can be conjugated to the liposomes as described in Martin *et al.*, J. Biol. Chem., 257: 286-288 (1982) via a disulfide-interchange reaction. A chemotherapeutic agent (such as Doxorubicin) is optionally contained within the liposome. See Gabizon *et al.*, J. National Cancer Inst., 81(19): 1484 (1989).

M. Pharmaceutical Compositions

The active PRO molecules of the invention (*e.g.*, PRO polypeptides, anti-PRO antibodies, and/or variants of each) as well as other molecules identified by the screening assays disclosed above, can be administered for the treatment of immune related diseases, in the form of pharmaceutical compositions.

Therapeutic formulations of the active PRO molecule, preferably a polypeptide or antibody of the invention, are prepared for storage by mixing the active molecule having the desired degree of purity with optional pharmaceutically acceptable carriers, excipients or stabilizers (*Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. [1980]), in the form of lyophilized formulations or aqueous solutions. Acceptable carriers, excipients, or stabilizers are nontoxic to recipients at the dosages and concentrations employed, and include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid and methionine; preservatives (such as octadecyldimethylbenzyl ammonium chloride; hexamethonium chloride; benzalkonium chloride, benzethonium chloride; phenol, butyl or benzyl alcohol; alkyl parabens such as methyl or propyl paraben; catechol; resorcinol; cyclohexanol; 3-pentanol; and m-cresol); low molecular weight (less than about 10 residues) polypeptides; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, histidine, arginine, or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrans; chelating agents such as EDTA; sugars such as sucrose, mannitol, trehalose or sorbitol; salt-forming counter-ions such as sodium; metal complexes (*e.g.*, Zn-protein complexes); and/or non-ionic surfactants such as TWEENTM, PLURONICSTM or polyethylene glycol (PEG).

Compounds identified by the screening assays disclosed herein can be formulated in an analogous manner, using standard techniques well known in the art.

Lipofections or liposomes can also be used to deliver the PRO molecule into cells. Where antibody fragments are used, the smallest inhibitory fragment which specifically binds to the binding domain of the target protein is preferred. For example, based upon the variable region sequences of an antibody, peptide molecules can be designed which retain the ability to bind the target protein sequence. Such peptides can be synthesized chemically and/or produced by recombinant DNA technology (see, *e.g.*, Marasco *et al.*, *Proc. Natl. Acad. Sci. USA* 90, 7889-7893 [1993]).

The formulation herein may also contain more than one active compound as necessary for the particular indication being treated, preferably those with complementary activities that do not adversely affect each other. Alternatively, or in addition, the composition may comprise a cytotoxic agent, cytokine or

growth inhibitory agent. Such molecules are suitably present in combination in amounts that are effective for the purpose intended.

The active PRO molecules may also be entrapped in microcapsules prepared, for example, by coacervation techniques or by interfacial polymerization, for example, hydroxymethylcellulose or gelatin-microcapsules and poly-(methylmethacrylate) microcapsules, respectively, in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nano-particles and nanocapsules) or in macroemulsions. Such techniques are disclosed in *Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. (1980).

The formulations to be used for *in vivo* administration must be sterile. This is readily accomplished by filtration through sterile filtration membranes.

Sustained-release preparations or the PRO molecules may be prepared. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the antibody, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (for example, poly(2-hydroxyethyl-methacrylate), or poly(vinylalcohol)), polylactides (U.S. Pat. No. 3,773,919), copolymers of L-glutamic acid and γ -ethyl-L-glutamate, non-degradable ethylene-vinyl acetate, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOTTM (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid. While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid enable release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods. When encapsulated antibodies remain in the body for a long time, they may denature or aggregate as a result of exposure to moisture at 37°C, resulting in a loss of biological activity and possible changes in immunogenicity. Rational strategies can be devised for stabilization depending on the mechanism involved. For example, if the aggregation mechanism is discovered to be intermolecular S-S bond formation through thio-disulfide interchange, stabilization may be achieved by modifying sulfhydryl residues, lyophilizing from acidic solutions, controlling moisture content, using appropriate additives, and developing specific polymer matrix compositions.

N. Methods of Treatment

It is contemplated that the polypeptides, antibodies and other active compounds of the present invention may be used to treat various immune related diseases and conditions, such as NK cell diseases, including those characterized by infiltration of inflammatory cells into a tissue, stimulation of NK cells, inhibition of NK cells, increased or decreased vascular permeability or the inhibition thereof.

Exemplary conditions or disorders to be treated with the polypeptides, antibodies and other compounds of the invention, include, but are not limited to systemic lupus erythematosus, rheumatoid arthritis, juvenile chronic arthritis, osteoarthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis,

idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease.

Rheumatoid arthritis (RA) is a chronic systemic autoimmune inflammatory disease that mainly involves the synovial membrane of multiple joints with resultant injury to the articular cartilage. The pathogenesis is T lymphocyte dependent and is associated with the production of rheumatoid factors, auto-antibodies directed against self IgG, with the resultant formation of immune complexes that attain high levels in joint fluid and blood. These complexes in the joint may induce the marked infiltrate of lymphocytes and NK cells into the synovium and subsequent marked synovial changes; the joint space/fluid if infiltrated by similar cells with the addition of numerous neutrophils. Tissues affected are primarily the joints, often in symmetrical pattern. However, extra-articular disease also occurs in two major forms. One form is the development of extra-articular lesions with ongoing progressive joint disease and typical lesions of pulmonary fibrosis, vasculitis, and cutaneous ulcers. The second form of extra-articular disease is the so called Felty's syndrome which occurs late in the RA disease course, sometimes after joint disease has become quiescent, and involves the presence of neutropenia, thrombocytopenia and splenomegaly. This can be accompanied by vasculitis in multiple organs with formations of infarcts, skin ulcers and gangrene. Patients often also develop rheumatoid nodules in the subcutis tissue overlying affected joints; the nodules late stage have necrotic centers surrounded by a mixed inflammatory cell infiltrate. Other manifestations which can occur in RA include: pericarditis, pleuritis, coronary arteritis, interstitial pneumonitis with pulmonary fibrosis, keratoconjunctivitis sicca, and rheumatoid nodules. As described above, Natural Killer cells are not believed to be involved in the early events of RA, but a study by Dalbeth et al., have found CD56 + NK cells in the synovial fluid of inflamed joints and these cells are believed to respond to IL-12 and IL-15 secreted by macrophages also found in synovial fluid from the inflamed joints (Dalbeth et al., 2002 Arthritis Rheum 46(7): 1763-72).

Juvenile chronic arthritis is a chronic idiopathic inflammatory disease which begins often at less than 16 years of age. Its phenotype has some similarities to RA; some patients which are rheumatoid factor positive are classified as juvenile rheumatoid arthritis. The disease is sub-classified into three major categories: pauciarticular, polyarticular, and systemic. The arthritis can be severe and is typically destructive and leads to joint ankylosis and retarded growth. Other manifestations can include chronic anterior uveitis and systemic amyloidosis.

Systemic sclerosis (scleroderma) has an unknown etiology. A hallmark of the disease is induration of the skin; likely this is induced by an active inflammatory process. Scleroderma can be localized or systemic; vascular lesions are common and endothelial cell injury in the microvasculature is an early and important event in the development of systemic sclerosis; the vascular injury may be immune mediated. An

immunologic basis is implied by the presence of mononuclear cell infiltrates in the cutaneous lesions and the presence of anti-nuclear antibodies in many patients. ICAM-1 is often upregulated on the cell surface of fibroblasts in skin lesions suggesting that T cell interaction with these cells may have a role in the pathogenesis of the disease. As well as T cells, NK cells are proposed to play a role in the progression of scleroderma in patients where the disease has progressed late into the disease course, and in those patients who did not express anti-Scl 70 antibodies (Holcombe et al., 1995 Ann Rheum Dis 54(1): 69-72). Other organs involved include: the gastrointestinal tract: smooth muscle atrophy and fibrosis resulting in abnormal peristalsis/motility; kidney: concentric subendothelial intimal proliferation affecting small arcuate and interlobular arteries with resultant reduced renal cortical blood flow, results in proteinuria, azotemia and hypertension; skeletal muscle: atrophy, interstitial fibrosis; inflammation; lung: interstitial pneumonitis and interstitial fibrosis; and heart: contraction band necrosis, scarring/fibrosis.

Idiopathic inflammatory myopathies including dermatomyositis, polymyositis and others are disorders of chronic muscle inflammation of unknown etiology resulting in muscle weakness. Muscle injury/inflammation is often symmetric and progressive. Autoantibodies are associated with most forms. These myositis-specific autoantibodies are directed against and inhibit the function of components, proteins and RNA's, involved in protein synthesis.

Sarcoidosis is a condition of unknown etiology which is characterized by the presence of epithelioid granulomas in nearly any tissue in the body; involvement of the lung is most common. The pathogenesis involves the persistence of activated macrophages and lymphoid cells at sites of the disease with subsequent chronic sequelae resultant from the release of locally and systemically active products released by these cell types.

Autoimmune hemolytic anemia including autoimmune hemolytic anemia, immune pancytopenia, and paroxysmal nocturnal hemoglobinuria is a result of production of antibodies that react with antigens expressed on the surface of red blood cells (and in some cases other blood cells including platelets as well) and is a reflection of the removal of those antibody coated cells via complement mediated lysis and/or ADCC/Fc-receptor-mediated mechanisms.

Thyroiditis including Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, and atrophic thyroiditis, are the result of an autoimmune response against thyroid antigens with production of antibodies that react with proteins present in and often specific for the thyroid gland. Experimental models exist including spontaneous models: rats (BUF and BB rats) and chickens (obese chicken strain); inducible models: immunization of animals with either thyroglobulin, thyroid microsomal antigen (thyroid peroxidase). NK cell activity was specifically studied in patients with Graves' disease and Hashimoto's thyroiditis, and a significant reduction in NK cell activity was found in both patient populations (Wenzel et al., 1998 Thyroid 8(11):1019-1022).

Inflammatory and Fibrotic Lung Disease, including Eosinophilic Pneumonias; Idiopathic Pulmonary Fibrosis, and Hypersensitivity Pneumonitis may involve a dysregulated immune-inflammatory response. Inhibition of that response would be of therapeutic benefit.

Psoriasis is a T lymphocyte-mediated inflammatory disease. Lesions contain infiltrates of T lymphocytes, macrophages and antigen processing cells, and some neutrophils.

Other diseases in which intervention of the immune and/or inflammatory response have benefit are infectious disease including but not limited to viral infection (including but not limited to AIDS, hepatitis A, B, C, D, E and herpes) bacterial infection, fungal infections, and protozoal and parasitic infections. Molecules (or derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response to infectious agents), diseases of immunodeficiency (molecules/derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response for conditions of inherited, acquired, infectious induced (as in HIV infection), or iatrogenic (*i.e.*, as from chemotherapy) immunodeficiency, and neoplasia.

It has been demonstrated that some human cancer patients develop an antibody and/or NK cell response to antigens on neoplastic cells. It has also been shown in animal models of neoplasia that enhancement of the immune response can result in rejection or regression of that particular neoplasm. Molecules that enhance the NK cell response have utility *in vivo* in enhancing the immune response against neoplasia. Molecules which enhance the NK cell proliferative response (or small molecule agonists or antibodies that affected the same receptor in an agonistic fashion) can be used therapeutically to treat cancer. Molecules that inhibit the NK cell response also function *in vivo* during neoplasia to suppress the immune response to a neoplasm; such molecules can either be expressed by the neoplastic cells themselves or their expression can be induced by the neoplasm in other cells. Antagonism of such inhibitory molecules (either with antibody, small molecule antagonists or other means) enhances immune-mediated tumor rejection.

Additionally, inhibition of molecules with proinflammatory properties may have therapeutic benefit in reperfusion injury; stroke; myocardial infarction; atherosclerosis; acute lung injury; hemorrhagic shock; burn; sepsis/septic shock; acute tubular necrosis; endometriosis; degenerative joint disease and pancreatitis.

The compounds of the present invention, *e.g.*, polypeptides or antibodies, are administered to a mammal, preferably a human, in accord with known methods, such as intravenous administration as a bolus or by continuous infusion over a period of time, by intramuscular, intraperitoneal, intracerebrospinal, subcutaneous, intra-articular, intrasynovial, intrathecal, oral, topical, or inhalation (intranasal, intrapulmonary) routes. Intravenous or inhaled administration of polypeptides and antibodies is preferred.

In immunoadjuvant therapy, other therapeutic regimens, such administration of an anti-cancer agent, may be combined with the administration of the proteins, antibodies or compounds of the instant invention. For example, the patient to be treated with the immunoadjuvant of the invention may also receive an anti-cancer agent (chemotherapeutic agent) or radiation therapy. Preparation and dosing schedules for such chemotherapeutic agents may be used according to manufacturers' instructions or as determined empirically by the skilled practitioner. Preparation and dosing schedules for such chemotherapy are also described in *Chemotherapy Service* Ed., M.C. Perry, Williams & Wilkins, Baltimore, MD (1992). The chemotherapeutic agent may precede, or follow administration of the immunoadjuvant or may be given simultaneously therewith. Additionally, an anti-estrogen compound such as tamoxifen or an anti-progesterone such as onapristone (see, EP 616812) may be given in dosages known for such molecules.

It may be desirable to also administer antibodies against other immune disease associated or tumor associated antigens, such as antibodies which bind to CD20, CD11a, CD18, ErbB2, EGFR, ErbB3, ErbB4, or vascular endothelial factor (VEGF). Alternatively, or in addition, two or more antibodies binding the same or two or more different antigens disclosed herein may be coadministered to the patient. Sometimes, it

may be beneficial to also administer one or more cytokines to the patient. In one embodiment, the PRO polypeptides are coadministered with a growth inhibitory agent. For example, the growth inhibitory agent may be administered first, followed by a PRO polypeptide. However, simultaneous administration or administration first is also contemplated. Suitable dosages for the growth inhibitory agent are those presently used and may be lowered due to the combined action (synergy) of the growth inhibitory agent and the PRO polypeptide.

For the treatment or reduction in the severity of immune related disease, the appropriate dosage of a compound of the invention will depend on the type of disease to be treated, as defined above, the severity and course of the disease, whether the agent is administered for preventive or therapeutic purposes, previous therapy, the patient's clinical history and response to the compound, and the discretion of the attending physician. The compound is suitably administered to the patient at one time or over a series of treatments.

For example, depending on the type and severity of the disease, about 1 $\mu\text{g/kg}$ to 15 mg/kg (*e.g.*, 0.1-20 mg/kg) of polypeptide or antibody is an initial candidate dosage for administration to the patient, whether, for example, by one or more separate administrations, or by continuous infusion. A typical daily dosage might range from about 1 $\mu\text{g/kg}$ to 100 mg/kg or more, depending on the factors mentioned above. For repeated administrations over several days or longer, depending on the condition, the treatment is sustained until a desired suppression of disease symptoms occurs. However, other dosage regimens may be useful. The progress of this therapy is easily monitored by conventional techniques and assays.

O. Articles of Manufacture

In another embodiment of the invention, an article of manufacture containing materials (*e.g.*, comprising a PRO molecule) useful for the diagnosis or treatment of the disorders described above is provided. The article of manufacture comprises a container and an instruction. Suitable containers include, for example, bottles, vials, syringes, and test tubes. The containers may be formed from a variety of materials such as glass or plastic. The container holds a composition which is effective for diagnosing or treating the condition and may have a sterile access port (for example the container may be an intravenous solution bag or a vial having a stopper pierceable by a hypodermic injection needle). The active agent in the composition is usually a polypeptide or an antibody of the invention. An instruction or label on, or associated with, the container indicates that the composition is used for diagnosing or treating the condition of choice. The article of manufacture may further comprise a second container comprising a pharmaceutically-acceptable buffer, such as phosphate-buffered saline, Ringer's solution and dextrose solution. It may further include other materials desirable from a commercial and user standpoint, including other buffers, diluents, filters, needles, syringes, and package inserts with instructions for use.

P. Diagnosis and Prognosis of Immune Related Disease

Cell surface proteins, such as proteins which are overexpressed in certain immune related diseases, are excellent targets for drug candidates or disease treatment. The same proteins along with secreted proteins encoded by the genes amplified in immune related disease states find additional use in the diagnosis and prognosis of these diseases. For example, antibodies directed against the protein products of genes amplified in multiple sclerosis, rheumatoid arthritis, or another immune related disease, can be used as diagnostics or prognostics.

For example, antibodies, including antibody fragments, can be used to qualitatively or quantitatively detect the expression of proteins encoded by amplified or overexpressed genes ("marker gene products"). The antibody preferably is equipped with a detectable, *e.g.*, fluorescent label, and binding can be monitored by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. These techniques are particularly suitable, if the overexpressed gene encodes a cell surface protein. Such binding assays are performed essentially as described above.

In situ detection of antibody binding to the marker gene products can be performed, for example, by immunofluorescence or immunoelectron microscopy. For this purpose, a histological specimen is removed from the patient, and a labeled antibody is applied to it, preferably by overlaying the antibody on a biological sample. This procedure also allows for determining the distribution of the marker gene product in the tissue examined. It will be apparent for those skilled in the art that a wide variety of histological methods are readily available for *in situ* detection.

The following examples are offered for illustrative purposes only, and are not intended to limit the scope of the present invention in any way.

All patent and literature references cited in the present specification are hereby incorporated by reference in their entirety.

EXAMPLES

Commercially available reagents referred to in the examples were used according to manufacturer's instructions unless otherwise indicated. The source of those cells identified in the following examples, and throughout the specification, by ATCC accession numbers is the American Type Culture Collection, Manassas, VA.

EXAMPLE 1: Microarray analysis of NK cells.

Nucleic acid microarrays, often containing thousands of gene sequences, are useful for identifying differentially expressed genes in diseased tissues as compared to their normal counterparts. Using nucleic acid microarrays, test and control mRNA samples from test and control tissue samples are reverse transcribed and labeled to generate cDNA probes. The cDNA probes are then hybridized to an array of nucleic acids immobilized on a solid support. The array is configured such that the sequence and position of each member of the array is known. For example, a selection of genes known to be expressed in certain disease states may be arrayed on a solid support. Hybridization of a labeled probe with a particular array member indicates that the sample from which the probe was derived expresses that gene. If the hybridization signal of a probe from a test (in this instance, activated NK cells) sample is greater than hybridization signal of a probe from a control (in this instance, resting NK cells) sample, the gene or genes expressed in the test tissue are identified. The implication of this result is that an overexpressed protein in a test tissue is useful not only as a diagnostic marker for the presence of the disease condition, but also as a therapeutic target for treatment of the disease condition.

The methodology of hybridization of nucleic acids and microarray technology is well known in the art. In one example, the specific preparation of nucleic acids for hybridization and probes, slides, and hybridization conditions are all detailed in PCT Patent Application Serial No. PCT/US01/10482, filed on March 30, 2001 and which is herein incorporated by reference.

For this experiment, peripheral blood NK cells were isolated from leukopacks by negative selection using the NK cell isolation kit with the Miltenyi MACS™ magnetic cell sorting system (Miltenyi Biotec). Cell purity was confirmed by staining with PE anti-CD56 for FACS analysis. Purity of cell preps ranged from 89% to 96%. Cell culture conditions were as follows: Set up in-vitro cultures in 6 well plates - 5 ml cultures/well using RPMI 1640, 10% heat inactivated FBS, 100 units/mL of Penicillin, 100 mg/mL of streptomycin, 2 mM L-glutamine, and 5.5×10^{-5} Beta-mercaptoethanol. The cells were cultured for 16 hours in the base media described above, but with the addition of IL-12 (10nM), IL-15(10nM) or JAM-IT(10nM). An untreated control sample was also cultured for 16 hours (16 Hour Timepoint). Activation of NK cells was monitored by FACS for cell surface expression of CD56 and CD69. Uncultured, untreated CD56(+) cells, for use as a control (Time 0). RNA was isolated using the Qiagen Midi™ preps as per the instructions in the manual with the addition of an on-column DNase I digestion after the first RW1 wash step. RNA was eluted in RNase free water and subsequently concentrated by ethanol precipitation. Precipitated RNA was taken up in nuclease free water to a final minimum concentration of 0.5 micrograms per microliter.

The isolated mRNA was labeled and hybridized to Affimax™ (Affymetrix Inc. Santa Clara, CA) microarray chips and proprietary Genentech microarrays. The cells harvested at Time 0 timepoint, and the 16 Hour timepoint were subjected to the same analysis. Genes were compared whose expression was upregulated at the 16 Hour Timepoint as compared to untreated 16 Hour Timepoint and uncultured, untreated Time 0 timepoints.

Below are the results of these experiments, demonstrating that various PRO polypeptides of the present invention are differentially expressed in activated NK cells after 16 hours in culture with IL-12, IL-15 or JAM2 as compared to normal resting NK cells cultured for 16 hours or resting NK cells harvested at Time 0. Specifically, Figure 438A-B, Figure 511, Figure 687, Figure 697, Figure 703, Figure 1057, Figure 1084, Figure 1126 and Figure 1228 identify sequences that are highly overexpressed in activated NK cells as compared to normal resting NK cells.

As described above, these data demonstrate that the PRO polypeptides of the present invention are useful not only as diagnostic markers for the presence of one or more immune disorders, but also serve as therapeutic targets for the treatment of those immune disorders.

The Figures 1-1477 show the nucleic acids of the invention and their encoded PRO polypeptides.

EXAMPLE 2: Use of PRO as a hybridization probe

The following method describes use of a nucleotide sequence encoding PRO as a hybridization probe.

DNA comprising the coding sequence of full-length or mature PRO as disclosed herein is employed as a probe to screen for homologous DNAs (such as those encoding naturally-occurring variants of PRO) in human tissue cDNA libraries or human tissue genomic libraries.

Hybridization and washing of filters containing either library DNAs is performed under the following high stringency conditions. Hybridization of radiolabeled PRO-derived probe to the filters is performed in a solution of 50% formamide, 5x SSC, 0.1% SDS, 0.1% sodium pyrophosphate, 50 mM

sodium phosphate, pH 6.8, 2x Denhardt's solution, and 10% dextran sulfate at 42°C for 20 hours. Washing of the filters is performed in an aqueous solution of 0.1x SSC and 0.1% SDS at 42°C.

DNAs having a desired sequence identity with the DNA encoding full-length native sequence PRO can then be identified using standard techniques known in the art.

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EXAMPLE 3: Expression of PRO in *E. coli*

This example illustrates preparation of an unglycosylated form of PRO by recombinant expression in *E. coli*.

The DNA sequence encoding PRO is initially amplified using selected PCR primers. The primers should contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector. A variety of expression vectors may be employed. An example of a suitable vector is pBR322 (derived from *E. coli*; see Bolivar et al., Gene, 2:95 (1977)) which contains genes for ampicillin and tetracycline resistance. The vector is digested with restriction enzyme and dephosphorylated. The PCR amplified sequences are then ligated into the vector. The vector will preferably include sequences which encode for an antibiotic resistance gene, a trp promoter, a polyhis leader (including the first six STII codons, polyhis sequence, and enterokinase cleavage site), the PRO coding region, lambda transcriptional terminator, and an argU gene.

The ligation mixture is then used to transform a selected *E. coli* strain using the methods described in Sambrook et al., supra. Transformants are identified by their ability to grow on LB plates and antibiotic resistant colonies are then selected. Plasmid DNA can be isolated and confirmed by restriction analysis and DNA sequencing.

Selected clones can be grown overnight in liquid culture medium such as LB broth supplemented with antibiotics. The overnight culture may subsequently be used to inoculate a larger scale culture. The cells are then grown to a desired optical density, during which the expression promoter is turned on.

After culturing the cells for several more hours, the cells can be harvested by centrifugation. The cell pellet obtained by the centrifugation can be solubilized using various agents known in the art, and the solubilized PRO protein can then be purified using a metal chelating column under conditions that allow tight binding of the protein.

PRO may be expressed in *E. coli* in a poly-His tagged form, using the following procedure. The DNA encoding PRO is initially amplified using selected PCR primers. The primers will contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector, and other useful sequences providing for efficient and reliable translation initiation, rapid purification on a metal chelation column, and proteolytic removal with enterokinase. The PCR-amplified, poly-His tagged sequences are then ligated into an expression vector, which is used to transform an *E. coli* host based on strain 52 (W3110 fuhA(tonA) lon galE rpoHts(htpRts) clpP(lacIq). Transformants are first grown in LB containing 50 mg/ml carbenicillin at 30°C with shaking until an O.D.600 of 3-5 is reached. Cultures are then diluted 50-100 fold into CRAP media (prepared by mixing 3.57 g (NH₄)₂SO₄, 0.71 g sodium citrate•2H₂O, 1.07 g KCl, 5.36 g Difco yeast extract, 5.36 g Sheffield hycase SF in 500 mL water, as well as 110 mM MPOS, pH 7.3, 0.55% (w/v) glucose and 7 mM MgSO₄) and grown for approximately 20-30 hours

at 30°C with shaking. Samples are removed to verify expression by SDS-PAGE analysis, and the bulk culture is centrifuged to pellet the cells. Cell pellets are frozen until purification and refolding.

E. coli paste from 0.5 to 1 L fermentations (6-10 g pellets) is resuspended in 10 volumes (w/v) in 7 M guanidine, 20 mM Tris, pH 8 buffer. Solid sodium sulfite and sodium tetrathionate is added to make final concentrations of 0.1M and 0.02 M, respectively, and the solution is stirred overnight at 4°C. This step results in a denatured protein with all cysteine residues blocked by sulfitolization. The solution is centrifuged at 40,000 rpm in a Beckman Ultracentrifuge for 30 min. The supernatant is diluted with 3-5 volumes of metal chelate column buffer (6 M guanidine, 20 mM Tris, pH 7.4) and filtered through 0.22 micron filters to clarify. The clarified extract is loaded onto a 5 ml Qiagen Ni-NTA metal chelate column equilibrated in the metal chelate column buffer. The column is washed with additional buffer containing 50 mM imidazole (Calbiochem, Utrol grade), pH 7.4. The protein is eluted with buffer containing 250 mM imidazole. Fractions containing the desired protein are pooled and stored at 4°C. Protein concentration is estimated by its absorbance at 280 nm using the calculated extinction coefficient based on its amino acid sequence.

The proteins are refolded by diluting the sample slowly into freshly prepared refolding buffer consisting of: 20 mM Tris, pH 8.6, 0.3 M NaCl, 2.5 M urea, 5 mM cysteine, 20 mM glycine and 1 mM EDTA. Refolding volumes are chosen so that the final protein concentration is between 50 to 100 micrograms/ml. The refolding solution is stirred gently at 4°C for 12-36 hours. The refolding reaction is quenched by the addition of TFA to a final concentration of 0.4% (pH of approximately 3). Before further purification of the protein, the solution is filtered through a 0.22 micron filter and acetonitrile is added to 2-10% final concentration. The refolded protein is chromatographed on a Poros R1/H reversed phase column using a mobile buffer of 0.1% TFA with elution with a gradient of acetonitrile from 10 to 80%. Aliquots of fractions with A280 absorbance are analyzed on SDS polyacrylamide gels and fractions containing homogeneous refolded protein are pooled. Generally, the properly refolded species of most proteins are eluted at the lowest concentrations of acetonitrile since those species are the most compact with their hydrophobic interiors shielded from interaction with the reversed phase resin. Aggregated species are usually eluted at higher acetonitrile concentrations. In addition to resolving misfolded forms of proteins from the desired form, the reversed phase step also removes endotoxin from the samples.

Fractions containing the desired folded PRO polypeptide are pooled and the acetonitrile removed using a gentle stream of nitrogen directed at the solution. Proteins are formulated into 20 mM Hepes, pH 6.8 with 0.14 M sodium chloride and 4% mannitol by dialysis or by gel filtration using G25 Superfine (Pharmacia) resins equilibrated in the formulation buffer and sterile filtered.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 4: Expression of PRO in mammalian cells

This example illustrates preparation of a potentially glycosylated form of PRO by recombinant expression in mammalian cells.

The vector, pRK5 (see EP 307,247, published March 15, 1989), is employed as the expression vector. Optionally, the PRO DNA is ligated into pRK5 with selected restriction enzymes to allow insertion of the PRO DNA using ligation methods such as described in Sambrook et al., supra. The resulting vector is called pRK5-PRO.

In one embodiment, the selected host cells may be 293 cells. Human 293 cells (ATCC CCL 1573) are grown to confluence in tissue culture plates in medium such as DMEM supplemented with fetal calf serum and optionally, nutrient components and/or antibiotics. About 10 µg pRK5-PRO DNA is mixed with about 1 µg DNA encoding the VA RNA gene [Thimmappaya et al., *Cell*, 31:543 (1982)] and dissolved in 500 µl of 1 mM Tris-HCl, 0.1 mM EDTA, 0.227 M CaCl₂. To this mixture is added, dropwise, 500 µl of 50 mM HEPES (pH 7.35), 280 mM NaCl, 1.5 mM NaPO₄, and a precipitate is allowed to form for 10 minutes at 25°C. The precipitate is suspended and added to the 293 cells and allowed to settle for about four hours at 37°C. The culture medium is aspirated off and 2 ml of 20% glycerol in PBS is added for 30 seconds. The 293 cells are then washed with serum free medium, fresh medium is added and the cells are incubated for about 5 days.

Approximately 24 hours after the transfections, the culture medium is removed and replaced with culture medium (alone) or culture medium containing 200 µCi/ml ³⁵S-cysteine and 200 µCi/ml ³⁵S-methionine. After a 12 hour incubation, the conditioned medium is collected, concentrated on a spin filter, and loaded onto a 15% SDS gel. The processed gel may be dried and exposed to film for a selected period of time to reveal the presence of PRO polypeptide. The cultures containing transfected cells may undergo further incubation (in serum free medium) and the medium is tested in selected bioassays.

In an alternative technique, PRO may be introduced into 293 cells transiently using the dextran sulfate method described by Sompayrac et al., *Proc. Natl. Acad. Sci.*, 12:7575 (1981). 293 cells are grown to maximal density in a spinner flask and 700 µg pRK5-PRO DNA is added. The cells are first concentrated from the spinner flask by centrifugation and washed with PBS. The DNA-dextran precipitate is incubated on the cell pellet for four hours. The cells are treated with 20% glycerol for 90 seconds, washed with tissue culture medium, and re-introduced into the spinner flask containing tissue culture medium, 5 µg/ml bovine insulin and 0.1 µg/ml bovine transferrin. After about four days, the conditioned media is centrifuged and filtered to remove cells and debris. The sample containing expressed PRO can then be concentrated and purified by any selected method, such as dialysis and/or column chromatography.

In another embodiment, PRO can be expressed in CHO cells. The pRK5-PRO can be transfected into CHO cells using known reagents such as CaPO₄ or DEAE-dextran. As described above, the cell cultures can be incubated, and the medium replaced with culture medium (alone) or medium containing a radiolabel such as ³⁵S-methionine. After determining the presence of PRO polypeptide, the culture medium may be replaced with serum free medium. Preferably, the cultures are incubated for about 6 days, and then the conditioned medium is harvested. The medium containing the expressed PRO can then be concentrated and purified by any selected method.

Epitope-tagged PRO may also be expressed in host CHO cells. The PRO may be subcloned out of the pRK5 vector. The subclone insert can undergo PCR to fuse in frame with a selected epitope tag such as a poly-his tag into a Baculovirus expression vector. The poly-his tagged PRO insert can then be subcloned into a SV40 promoter/enhancer containing vector containing a selection marker such as DHFR for selection of stable clones. Finally, the CHO cells can be transfected (as described above) with the SV40 promoter/enhancer containing vector. Labeling may be performed, as described above, to verify expression. The culture medium containing the expressed poly-His tagged PRO can then be concentrated and purified by any selected method, such as by Ni²⁺-chelate affinity chromatography.

PRO may also be expressed in CHO and/or COS cells by a transient expression procedure or in CHO cells by another stable expression procedure.

Stable expression in CHO cells is performed using the following procedure. The proteins are expressed as an IgG construct (immunoadhesin), in which the coding sequences for the soluble forms (e.g. extracellular domains) of the respective proteins are fused to an IgG1 constant region sequence containing the hinge, CH2 and CH2 domains and/or is a poly-His tagged form.

Following PCR amplification, the respective DNAs are subcloned in a CHO expression vector using standard techniques as described in Ausubel et al., Current Protocols of Molecular Biology, Unit 3.16, John Wiley and Sons (1997). CHO expression vectors are constructed to have compatible restriction sites 5' and 3' of the DNA of interest to allow the convenient shuttling of cDNA's. The vector used expression in CHO cells is as described in Lucas et al., Nucl. Acids Res. 24:9 (1774-1779 (1996), and uses the SV40 early promoter/enhancer to drive expression of the cDNA of interest and dihydrofolate reductase (DHFR). DHFR expression permits selection for stable maintenance of the plasmid following transfection.

Twelve micrograms of the desired plasmid DNA is introduced into approximately 10 million CHO cells using commercially available transfection reagents Superfect® (Quiagen), Dospert® or Eugene® (Boehringer Mannheim). The cells are grown as described in Lucas et al., supra. Approximately 3×10^7 cells are frozen in an ampule for further growth and production as described below.

The ampules containing the plasmid DNA are thawed by placement into water bath and mixed by vortexing. The contents are pipetted into a centrifuge tube containing 10 mL of media and centrifuged at 1000 rpm for 5 minutes. The supernatant is aspirated and the cells are resuspended in 10 mL of selective media (0.2 µm filtered PS20 with 5% 0.2 µm diafiltered fetal bovine serum). The cells are then aliquoted into a 100 mL spinner containing 90 mL of selective media. After 1-2 days, the cells are transferred into a 250 mL spinner filled with 150 mL selective growth medium and incubated at 37°C. After another 2-3 days, 250 mL, 500 mL and 2000 mL spinners are seeded with 3×10^5 cells/mL. The cell media is exchanged with fresh media by centrifugation and resuspension in production medium. Although any suitable CHO media may be employed, a production medium described in U.S. Patent No. 5,122,469, issued June 16, 1992 may actually be used. A 3L production spinner is seeded at 1.2×10^6 cells/mL. On day 0, pH is determined. On day 1, the spinner is sampled and sparging with filtered air is commenced. On day 2, the spinner is sampled, the temperature shifted to 33°C, and 30 mL of 500 g/L glucose and 0.6 mL of 10% antifoam (e.g., 35% polydimethylsiloxane emulsion, Dow Corning 365 Medical Grade Emulsion) taken. Throughout the production, the pH is adjusted as necessary to keep it at around 7.2. After 10 days, or until the viability dropped below 70%, the cell culture is harvested by centrifugation and filtering through a 0.22 µm filter. The filtrate was either stored at 4°C or immediately loaded onto columns for purification.

For the poly-His tagged constructs, the proteins are purified using a Ni-NTA column (Qiagen). Before purification, imidazole is added to the conditioned media to a concentration of 5 mM. The conditioned media is pumped onto a 6 ml Ni-NTA column equilibrated in 20 mM Hepes, pH 7.4, buffer containing 0.3 M NaCl and 5 mM imidazole at a flow rate of 4-5 ml/min. at 4°C. After loading, the column is washed with additional equilibration buffer and the protein eluted with equilibration buffer containing 0.25 M imidazole. The highly purified protein is subsequently desalted into a storage buffer containing 10

mM Hepes, 0.14 M NaCl and 4% mannitol, pH 6.8, with a 25 ml G25 Superfine (Pharmacia) column and stored at -80°C.

Immunoadhesin (Fc-containing) constructs are purified from the conditioned media as follows. The conditioned medium is pumped onto a 5 ml Protein A column (Pharmacia) which had been equilibrated in 20 mM Na phosphate buffer, pH 6.8. After loading, the column is washed extensively with equilibration buffer before elution with 100 mM citric acid, pH 3.5. The eluted protein is immediately neutralized by collecting 1 ml fractions into tubes containing 275 µl of 1 M Tris buffer, pH 9. The highly purified protein is subsequently desalted into storage buffer as described above for the poly-His tagged proteins. The homogeneity is assessed by SDS polyacrylamide gels and by N-terminal amino acid sequencing by Edman degradation.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 5: Expression of PRO in Yeast

The following method describes recombinant expression of PRO in yeast.

First, yeast expression vectors are constructed for intracellular production or secretion of PRO from the ADH2/GAPDH promoter. DNA encoding PRO and the promoter is inserted into suitable restriction enzyme sites in the selected plasmid to direct intracellular expression of PRO. For secretion, DNA encoding PRO can be cloned into the selected plasmid, together with DNA encoding the ADH2/GAPDH promoter, a native PRO signal peptide or other mammalian signal peptide, or, for example, a yeast alpha-factor or invertase secretory signal/leader sequence, and linker sequences (if needed) for expression of PRO.

Yeast cells, such as yeast strain AB110, can then be transformed with the expression plasmids described above and cultured in selected fermentation media. The transformed yeast supernatants can be analyzed by precipitation with 10% trichloroacetic acid and separation by SDS-PAGE, followed by staining of the gels with Coomassie Blue stain.

Recombinant PRO can subsequently be isolated and purified by removing the yeast cells from the fermentation medium by centrifugation and then concentrating the medium using selected cartridge filters. The concentrate containing PRO may further be purified using selected column chromatography resins.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 6: Expression of PRO in Baculovirus-Infected Insect Cells

The following method describes recombinant expression of PRO in Baculovirus-infected insect cells.

The sequence coding for PRO is fused upstream of an epitope tag contained within a baculovirus expression vector. Such epitope tags include poly-his tags and immunoglobulin tags (like Fc regions of IgG). A variety of plasmids may be employed, including plasmids derived from commercially available plasmids such as pVL1393 (Novagen). Briefly, the sequence encoding PRO or the desired portion of the coding sequence of PRO such as the sequence encoding the extracellular domain of a transmembrane protein or the sequence encoding the mature protein if the protein is extracellular is amplified by PCR with primers complementary to the 5' and 3' regions. The 5' primer may incorporate flanking (selected) restriction

enzyme sites. The product is then digested with those selected restriction enzymes and subcloned into the expression vector.

Recombinant baculovirus is generated by co-transfecting the above plasmid and BaculoGold™ virus DNA (Pharmingen) into *Spodoptera frugiperda* ("Sf9") cells (ATCC CRL 1711) using lipofectin (commercially available from GIBCO-BRL). After 4 - 5 days of incubation at 28°C, the released viruses are harvested and used for further amplifications. Viral infection and protein expression are performed as described by O'Reilley et al., Baculovirus expression vectors: A Laboratory Manual, Oxford: Oxford University Press (1994).

Expressed poly-his tagged PRO can then be purified, for example, by Ni²⁺-chelate affinity chromatography as follows. Extracts are prepared from recombinant virus-infected Sf9 cells as described by Rupert et al., Nature, 362:175-179 (1993). Briefly, Sf9 cells are washed, resuspended in sonication buffer (25 mL Hepes, pH 7.9; 12.5 mM MgCl₂; 0.1 mM EDTA; 10% glycerol; 0.1% NP-40; 0.4 M KCl), and sonicated twice for 20 seconds on ice. The sonicates are cleared by centrifugation, and the supernatant is diluted 50-fold in loading buffer (50 mM phosphate, 300 mM NaCl, 10% glycerol, pH 7.8) and filtered through a 0.45 µm filter. A Ni²⁺-NTA agarose column (commercially available from Qiagen) is prepared with a bed volume of 5 mL, washed with 25 mL of water and equilibrated with 25 mL of loading buffer. The filtered cell extract is loaded onto the column at 0.5 mL per minute. The column is washed to baseline A₂₈₀ with loading buffer, at which point fraction collection is started. Next, the column is washed with a secondary wash buffer (50 mM phosphate; 300 mM NaCl, 10% glycerol, pH 6.0), which elutes nonspecifically bound protein. After reaching A₂₈₀ baseline again, the column is developed with a 0 to 500 mM Imidazole gradient in the secondary wash buffer. One mL fractions are collected and analyzed by SDS-PAGE and silver staining or Western blot with Ni²⁺-NTA-conjugated to alkaline phosphatase (Qiagen). Fractions containing the eluted His₁₀-tagged PRO are pooled and dialyzed against loading buffer.

Alternatively, purification of the IgG tagged (or Fc tagged) PRO can be performed using known chromatography techniques, including for instance, Protein A or protein G column chromatography.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 7: Preparation of Antibodies that Bind PRO

This example illustrates preparation of monoclonal antibodies which can specifically bind PRO.

Techniques for producing the monoclonal antibodies are known in the art and are described, for instance, in Goding, supra. Immunogens that may be employed include purified PRO, fusion proteins containing PRO, and cells expressing recombinant PRO on the cell surface. Selection of the immunogen can be made by the skilled artisan without undue experimentation.

Mice, such as Balb/c, are immunized with the PRO immunogen emulsified in complete Freund's adjuvant and injected subcutaneously or intraperitoneally in an amount from 1-100 micrograms. Alternatively, the immunogen is emulsified in MPL-TDM adjuvant (Ribi Immunochemical Research, Hamilton, MT) and injected into the animal's hind foot pads. The immunized mice are then boosted 10 to 12 days later with additional immunogen emulsified in the selected adjuvant. Thereafter, for several weeks, the mice may also be boosted with additional immunization injections. Serum samples may be periodically obtained from the mice by retro-orbital bleeding for testing in ELISA assays to detect anti-PRO antibodies.

After a suitable antibody titer has been detected, the animals "positive" for antibodies can be injected with a final intravenous injection of PRO. Three to four days later, the mice are sacrificed and the spleen cells are harvested. The spleen cells are then fused (using 35% polyethylene glycol) to a selected murine myeloma cell line such as P3X63AgU.1, available from ATCC, No. CRL 1597. The fusions generate hybridoma cells which can then be plated in 96 well tissue culture plates containing HAT (hypoxanthine, aminopterin, and thymidine) medium to inhibit proliferation of non-fused cells, myeloma hybrids, and spleen cell hybrids.

The hybridoma cells will be screened in an ELISA for reactivity against PRO. Determination of "positive" hybridoma cells secreting the desired monoclonal antibodies against PRO is within the skill in the art.

The positive hybridoma cells can be injected intraperitoneally into syngeneic Balb/c mice to produce ascites containing the anti-PRO monoclonal antibodies. Alternatively, the hybridoma cells can be grown in tissue culture flasks or roller bottles. Purification of the monoclonal antibodies produced in the ascites can be accomplished using ammonium sulfate precipitation, followed by gel exclusion chromatography. Alternatively, affinity chromatography based upon binding of antibody to protein A or protein G can be employed.

EXAMPLE 8: Purification of PRO Polypeptides Using Specific Antibodies

Native or recombinant PRO polypeptides may be purified by a variety of standard techniques in the art of protein purification. For example, pro-PRO polypeptide, mature PRO polypeptide, or pre-PRO polypeptide is purified by immunoaffinity chromatography using antibodies specific for the PRO polypeptide of interest. In general, an immunoaffinity column is constructed by covalently coupling the anti-PRO polypeptide antibody to an activated chromatographic resin.

Polyclonal immunoglobulins are prepared from immune sera either by precipitation with ammonium sulfate or by purification on immobilized Protein A (Pharmacia LKB Biotechnology, Piscataway, N.J.). Likewise, monoclonal antibodies are prepared from mouse ascites fluid by ammonium sulfate precipitation or chromatography on immobilized Protein A. Partially purified immunoglobulin is covalently attached to a chromatographic resin such as CnBr-activated SEPHAROSE™ (Pharmacia LKB Biotechnology). The antibody is coupled to the resin, the resin is blocked, and the derivative resin is washed according to the manufacturer's instructions.

Such an immunoaffinity column is utilized in the purification of PRO polypeptide by preparing a fraction from cells containing PRO polypeptide in a soluble form. This preparation is derived by solubilization of the whole cell or of a subcellular fraction obtained via differential centrifugation by the addition of detergent or by other methods well known in the art. Alternatively, soluble PRO polypeptide containing a signal sequence may be secreted in useful quantity into the medium in which the cells are grown.

A soluble PRO polypeptide-containing preparation is passed over the immunoaffinity column, and the column is washed under conditions that allow the preferential absorbance of PRO polypeptide (*e.g.*, high ionic strength buffers in the presence of detergent). Then, the column is eluted under conditions that disrupt

antibody/PRO polypeptide binding (*e.g.*, a low pH buffer such as approximately pH 2-3, or a high concentration of a chaotrope such as urea or thiocyanate ion), and PRO polypeptide is collected.

EXAMPLE 9: Drug Screening

5 This invention is particularly useful for screening compounds by using PRO polypeptides or binding fragment thereof in any of a variety of drug screening techniques. The PRO polypeptide or fragment employed in such a test may either be free in solution, affixed to a solid support, borne on a cell surface, or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the PRO polypeptide or fragment.

10 Drugs are screened against such transformed cells in competitive binding assays. Such cells, either in viable or fixed form, can be used for standard binding assays. One may measure, for example, the formation of complexes between PRO polypeptide or a fragment and the agent being tested. Alternatively, one can examine the diminution in complex formation between the PRO polypeptide and its target cell or target receptors caused by the agent being tested.

15 Thus, the present invention provides methods of screening for drugs or any other agents which can affect a PRO polypeptide-associated disease or disorder. These methods comprise contacting such an agent with an PRO polypeptide or fragment thereof and assaying (i) for the presence of a complex between the agent and the PRO polypeptide or fragment, or (ii) for the presence of a complex between the PRO polypeptide or fragment and the cell, by methods well known in the art. In such competitive binding assays,
20 the PRO polypeptide or fragment is typically labeled. After suitable incubation, free PRO polypeptide or fragment is separated from that present in bound form, and the amount of free or uncomplexed label is a measure of the ability of the particular agent to bind to PRO polypeptide or to interfere with the PRO polypeptide/cell complex.

Another technique for drug screening provides high throughput screening for compounds having
25 suitable binding affinity to a polypeptide and is described in detail in WO 84/03564, published on September 13, 1984. Briefly stated, large numbers of different small peptide test compounds are synthesized on a solid substrate, such as plastic pins or some other surface. As applied to a PRO polypeptide, the peptide test compounds are reacted with PRO polypeptide and washed. Bound PRO polypeptide is detected by methods well known in the art. Purified PRO polypeptide can also be coated directly onto plates for use in the
30 aforementioned drug screening techniques. In addition, non-neutralizing antibodies can be used to capture the peptide and immobilize it on the solid support.

This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding PRO polypeptide specifically compete with a test compound for binding to PRO polypeptide or fragments thereof. In this manner, the antibodies can be used to detect the presence of
35 any peptide which shares one or more antigenic determinants with PRO polypeptide.

EXAMPLE 10: Rational Drug Design

The goal of rational drug design is to produce structural analogs of biologically active polypeptide of interest (*i.e.*, a PRO polypeptide) or of small molecules with which they interact, *e.g.*, agonists,
40 antagonists, or inhibitors. Any of these examples can be used to fashion drugs which are more active or

stable forms of the PRO polypeptide or which enhance or interfere with the function of the PRO polypeptide *in vivo* (c.f., Hodgson, Bio/Technology, 9: 19-21 (1991)).

In one approach, the three-dimensional structure of the PRO polypeptide, or of a PRO polypeptide-inhibitor complex, is determined by x-ray crystallography, by computer modeling or, most typically, by a combination of the two approaches. Both the shape and charges of the PRO polypeptide must be ascertained to elucidate the structure and to determine active site(s) of the molecule. Less often, useful information regarding the structure of the PRO polypeptide may be gained by modeling based on the structure of homologous proteins. In both cases, relevant structural information is used to design analogous PRO polypeptide-like molecules or to identify efficient inhibitors. Useful examples of rational drug design may include molecules which have improved activity or stability as shown by Braxton and Wells, Biochemistry, 31:7796-7801 (1992) or which act as inhibitors, agonists, or antagonists of native peptides as shown by Athauda *et al.*, J. Biochem., 113:742-746 (1993).

It is also possible to isolate a target-specific antibody, selected by functional assay, as described above, and then to solve its crystal structure. This approach, in principle, yields a pharmacore upon which subsequent drug design can be based. It is possible to bypass protein crystallography altogether by generating anti-idiotypic antibodies (anti-ids) to a functional, pharmacologically active antibody. As a mirror image of a mirror image, the binding site of the anti-ids would be expected to be an analog of the original receptor. The anti-id could then be used to identify and isolate peptides from banks of chemically or biologically produced peptides. The isolated peptides would then act as the pharmacore.

By virtue of the present invention, sufficient amounts of the PRO polypeptide may be made available to perform such analytical studies as X-ray crystallography. In addition, knowledge of the PRO polypeptide amino acid sequence provided herein will provide guidance to those employing computer modeling techniques in place of or in addition to x-ray crystallography.

The foregoing written specification is considered to be sufficient to enable one skilled in the art to practice the invention. The present invention is not to be limited in scope by the construct deposited, since the deposited embodiment is intended as a single illustration of certain aspects of the invention and any constructs that are functionally equivalent are within the scope of this invention. The deposit of material herein does not constitute an admission that the written description herein contained is inadequate to enable the practice of any aspect of the invention, including the best mode thereof, nor is it to be construed as limiting the scope of the claims to the specific illustrations that it represents. Indeed, various modifications of the invention in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and fall within the scope of the appended claims.

What is claimed:

- 5 1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence identity to:
 - (a) the nucleotide sequence shown in any one of the Figures 1-1477 (SEQ ID NOS: 1-1477); or
 - (b) the nucleotide sequence encoding the polypeptide shown in any one of the Figures 1-1477 (SEQ ID NOS: 1-1477).
- 10 2. A vector comprising the nucleic acid of Claim 1.
- 15 3. The vector of Claim 2 operably linked to control sequences recognized by a host cell transformed with the vector.
4. A host cell comprising the vector of Claim 2.
5. The host cell of Claim 4, wherein said cell is a CHO cell, an *E.coli* cell or a yeast cell.
- 20 6. A process for producing a PRO polypeptide comprising culturing the host cell of Claim 5 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.
- 25 7. An isolated polypeptide having at least 80% amino acid sequence identity to:
 - (a) a polypeptide shown in any one of Figures 1-1477 (SEQ ID NOS: 1-1477); or
 - (b) a polypeptide encoded by the full length coding region of the nucleotide sequence shown in any one of Figures 1-1477 (SEQ ID NOS: 1-1477).
- 30 8. A chimeric molecule comprising a polypeptide according to Claim 7 fused to a heterologous amino acid sequence.
9. The chimeric molecule of Claim 8, wherein said heterologous amino acid sequence is an epitope tag sequence or an Fc region of an immunoglobulin.
- 35 10. An antibody which specifically binds to a polypeptide according to Claim 7.
11. The antibody of Claim 10, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

12. A composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, in combination with a carrier.

5 13. The composition of matter of Claim 12, wherein said carrier is a pharmaceutically acceptable carrier.

14. The composition of matter of Claim 13 comprising a therapeutically effective amount of (a), (b), (c) or (d).

10 15. An article of manufacture, comprising:
a container;
a label on said container; and
a composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide,
15 (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, contained within said container, wherein label on said container indicates that said composition of matter can be used for treating an immune related disease.

20 16. A method of treating an immune related disorder in a mammal in need thereof comprising administering to said mammal a therapeutically effective amount of (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide.

25 17. The method of Claim 16, wherein the immune related disorder is systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory myopathy, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, a demyelinating disease of the central or peripheral nervous system, idiopathic demyelinating polyneuropathy, Guillain-Barré syndrome, a chronic inflammatory demyelinating
30 polyneuropathy, a hepatobiliary disease, infectious or autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, Whipple's disease, an autoimmune or immune-mediated skin disease, a bullous skin disease, erythema multiforme, contact dermatitis, psoriasis, an allergic disease, asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity, urticaria, an immunologic disease of the lung, eosinophilic pneumonias,
35 idiopathic pulmonary fibrosis, hypersensitivity pneumonitis, a transplantation associated disease, graft rejection or graft-versus-host-disease.

18. A method for determining the presence of a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), in a sample suspected of containing said polypeptide, said

method comprising exposing said sample to an anti-PRO antibody, where the and determining binding of said antibody to a component of said sample.

19. A method of diagnosing an immune related disease in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

20. A method of diagnosing an immune related disease in a mammal, said method comprising (a) contacting a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), anti-PRO antibody with a test sample of tissue cells obtained from said mammal and (b) detecting the formation of a complex between the antibody and the polypeptide in the test sample, wherein formation of said complex is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

21. A method of identifying a compound that inhibits the activity of a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally respond to said polypeptide with (a) said polypeptide and (b) a candidate compound, and determining the lack responsiveness by said cell to (a).

22. A method of identifying a compound that inhibits the expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally express said polypeptide with a candidate compound, and determining the lack of expression said gene.

23. The method of Claim 22, wherein said candidate compound is an antisense nucleic acid.

24. A method of identifying a compound that mimics the activity of a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally respond to said polypeptide with a candidate compound, and determining the responsiveness by said cell to said candidate compound.

25. A method of stimulating the immune response in a mammal, said method comprising administering to said mammal an effective amount of a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), antagonist, wherein said immune response is stimulated.

26. A method of diagnosing an inflammatory immune response in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an inflammatory immune response in the mammal from which the test tissue cells were obtained.
- 5

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FIGURE 1

CTGCAGGCGTCGCGCCAATCTTCGCTCTGAGGTGCTGTCTCACCGGTGAGACCTGGAAGCGGGCGAGTCTCGTGC
TGTGTCGGACCTGCAGCCCCCTGGCCTTCCGCCACCATGGAGTACCTCATCGGTATCCAAGGCCCCGACTATGTTC
TTGTGCGCTCCGACCGGGTGGCCGCCAGCAATATTGTCCAGATGAAGGACGATCATGACAAGATGTTTAAGATGA
GTGAAAAGATATTACTCCTGTGTGTTGGAGAGGCTGGAGACACTGTACAGTTTGCAGAATATATTCAGAAAAACG
TGCAACTTTATAAGATGCGAAATGGATATGAATTGTCTCCACGGCAGCAGCTAACTTCACACGCCGAAACCTGG
CTGACTGTCTTTCGGAGTCGGACCCCATATCATGTGAACCTCCTCCTGGCTGGCTATGATGAGCATGAAGGGCCAG
CGCTGTATTACATGGACTACCTGGCAGCCTTGGCCAAGGCCCTTTTGCAGCCCACGGCTATGGTGCCTTCCTGA
CTCTCAGTATCCTCGACCGATACTACACACCGACTATCTCACGTGAGAGGGCAGTGGAACCTCCTTAGGAAATGTC
TGGAGGAGCTCCAGAAACGCTTCATCCTGAATCTGCCAACCTTCAGTGTTTGAATCATTGACAAAAATGGCATCC
ATGACCTGGATAACATTTCTTCCCAAACAGGGCTCCTTAACATCATGTCCTCCCTCCCACTTGCCAGGGAACTT
TTTTTTGATGGGCTCCTTTATTTTTTTCTACTCTTTTCAGGCGCACTCTTGATAAATGGTTAATTGAGAATAAAG
GTGACTATGGATATAATTGAAAAAA

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FIGURE 2

MEYLIIGIQGPDYVLVASDRVAASNIVQMKDDHDKMFKMSEKILLLCVGEAGDTVQFAEYIQKNVQLYKMRNGYEL
SPTAAANFTRRNADCLRSRTPYHVNLLLAGYDEHEGPALYYMDYLAALAKAPFAAHGYGAFTLSILDRIYTPT
ISRERAVELLRKCLEELQKRFILNLPFSVRIIDKNGIHDLDNISFPKQGS

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FIGURE 3

CTCCGGCGCAGTGTGGGACTGTCTGGGTATCGGAAAGCAAGCCTACGTTGCTCACTATTACGTATAATCCTTTT
CTTTTCAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGAGACTTTTGCCTTTCAGGCAGAAATTGCC
CAACTCATGTCCCTCATCATCAATACCTTCTATTCCAACAAGGAGATTTTCCTTCGGGAGTTGATCTCTAATGCT
TCTGATGCCTTGGACAAGATTGCTATGAGAGCCTGACAGACCCCTTCGAAAGTTGGACAGTGGTAAAGAGCTGAAA
ATTGACATCATCCCCAACCCCTCAGGAACGTACCCTGACTTTGGTAGACACAGGCATTGGCATGACCAAAGCTGAT
CTCATAAATAAATTTGGGAACCATTGCCAAGTCTGGTACTAAAGCATTTCATGGAGGCTCTTCAGGCTGGTGCAGAC
ATCTCCATGATTGGGCGAGTTTGGTGTGGCTTTTATTCTGCCTACTTGGTGGCAGAGAAAGTGGTTGTGATCACA
AAGCACAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCCTTCACTGTGCGTGCTGACCATGGT
GAGCCCATTTGGCAGGGGTACCAAAGTGATCCTCCATCTTAAAGAAGATCAGACAGAGTACCTAGAAGAGAGGCGG
GTCAAAGAAGTAGTGAAGAAGCATTCTCAGTTCATAGGCTATCCCATCACCTTTTATTTGGAGAAGGAACGAGAG
AAGGAAATTAGTGATGATGAGGCAGAGGAAGAGAAAGGTGAGAAAGAAGAGGAAGATAAAGATGATGAAGAAAAA
CCCAAGATCGAAGATGTGGGTTCAGATGAGGAGGATGACAGCGGTAAGGATAAGAAGAAGAAAACCTAAGAAGATC
AAAGAGAAATACATTGATCAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAACCCCTGATGACATCACC
CAAGAGGAGTATGGAGAATTCTACAAGAGCCTCACTAATGACTGGGAAGACCACTTGGCAGTCAAGCACTTTTCT
GTAGAAGGTCAGTTGGAATTCAGGGCATTGCTATTTATTCTCGTCGGGCTCCCTTTGACCTTTTTGAGAACAAG
AAGAAAAAGAACAACATCAAACCTCTATGTCCGCCGTGTGTTTCATCATGGACAGCTGTGATGAGTTGATACCAGAG
TATCTCAATTTTATCCGTGGTGTGGTTGACTCTGAGGATCTGCCCTGAACATCTCCCGAGAAATGCTCCAGCAG
AGCAAAATCTTGAAAGTCATTTCGCAAAAACATTGTTAAGAAGTGCTTGAGCTCTTCTCTGAGCTGGCAGAAGAC
AAGGAGAATTACAAGAAATTCTATGAGGCATTCTCTAAAAATCTCAAGCTTGGAATCCACGAAGACTCCACTAAC
CGCCGCCGCTGTCTGAGCTGCTGCGCTATCATACCTCCCAGTCTGGAGATGAGATGACATCTCTGTGAGAGTAT
GTTTCTCGCATGAAGGAGACACAGAAGTCCATCTATTACATCACTGGTGAGAGCAAAGAGCAGGTGGCCAACTCA
GCTTTTGTGGAGCGAGTGCAGGAAACGGGGCTTCGAGGTGGTATATATGACCGAGCCCATTGACGAGTACTGTGTG
CAGCAGCTCAAGGAATTTGATGGGAAGAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAGCTGCCTGAGGATGAG
GAGGAGAAGAAGAAGATGGAAGAGAGCAAGGCAAAGTTTGAGAACCTCTGCAAGCTCATGAAAGAAATCTTAGAT
AAGAAGGTTGAGAAGGTGACAATCTCCAATAGACTTGTGTCTTCACCTTGCTGCATTGTGACCAGCACCTACGGC
TGGACAGCCAATATGGAGCGGATCATGAAAGCCCAGGCACTTCGGGACAACCTCCACCATGGGCTATATGATGGCC
AAAAAGCACCTGGAGATCAACCCCTGACCACCCCATTTGTGGAGACGCTGCGGCAGAAGGCTGAGGCCGACAAGAAT
GATAAGGCAGTTAAGGACCTGGTGGTGTGCTGTTTGAAACCGCCCTGCTATCTTCTGGCTTTTCCCTTGAGGAT
CCCCAGACCCACTCCAACCGCATCTATCGCATGATCAAGCTAGGTCTAGGTATTGATGAAGATGAAGTGGCAGCA
GAGGAACCCAATGCTGCAGTTCCTGATGAGATCCCCCTCTCGAGGGCGATGAGGATGCGTCTCGCATGGAAGAA
GTCGATTAGGTTAGGAGTTCATAGTTGGAACCTTGTGCCCTTGATAGTGTCCCCATGGGCTCCCACTGCAGCC
TCGAGTGCCCTGTCCCACCTGGCTCCCCCTGCTGGTGTCTAGTGTTTTTTCCCTCTCCTGTCTTGTGTTGAA
GGCAGTAAACTAAGGGTGTCAAGCCCCATTCCCTCTCTACTCTTGACAGCAGGATTGGATGTTGTGTATTGTGGT
TTATTTTATTTTCTTCATTTTGTCTGAAATTAAAGTATGCAAAATAAAGAATATGCCGTTTTAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 4

MPEEVHHGEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELI SNASDALDKIRYESLTDP SKLDSGKELKIDI
IPNPQERTLTTLVDTGIGMTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVVVITKHN
DDEQYAWESSAGGSFTVRADHGEP IGRGTKVILHLKEDQTEYLEERRVKEVVKKHSQFIGYPITLYLEKEREKEI
SDDEAEEEEKGEKEEEDKDDEEKPKIEDVGSDEEDDSGDKKKKTKKIKEKYIDQEELNKTPIWTRNPDDITQEE
YGEFYKSLTNDWEDHLAVKHFSVEGQLEFRALLFIPRRAPFDLFENKKKKNNIKLYVRRVFIMDSCDELIPEYLN
FIRGVVDSEDLPLNISREMLQOSKILKVIRKNIVKKCLELFSELAEDKENYKKFYEAFSKNLKLGIHEDSTNRRR
LSELLRYHTSQSGDEMTSLSEYVSRMKETQKSIYYITGESKEQVANSFAFVERVRKRGFEVVYMTPEID EYCVQQL
KEFDGKSLVSVTKEGLELPEDEEEKKKMEESKAKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTA
NMERIMKAQALRDNSTMGYMAKKHLEINPDHPIVETLRQKAEADKNDKAVKDLVVLLFETALLSSGFSLEDPQT
HSNRIYRMIKLGLGIDEDEVAAEEPNAAVPDEIPPLEGDEDA SRMEEVD

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FIGURE 5

GAATTCCGGGGCCATGAGCTGCCCCGTGCCCGCTGCTGCGCGCTGCTGCTAGTCCTGGGGCTCTGCCGGGCGCGT
CCCCGGAACGCACTGCTGCTCCTCGCGGATGACGGAGGCTTTGAGAGTGGCGCGTACAACAACAGCGCCATCGCC
ACCCCGCACCTGGACGCCTTGGCCCGCCGACGCTCCTCTTCGCAATGCCTTCACCTCGGTGAGCAGCTGCTCT
CCCAGCCGCGCCAGCCTCCTCACTGGCCTGCCCCAGCATCAGAAATGGGATGTACGGGCTGCACCAGGACGTGCAC
CACTTCAACTCCTTCGACAAGGTGCGGAGCCTGCCGCTGCTGCTCAGCCAAGCTGGTGTGCGCACAGGCATCATC
GGGAAGAAGCACGTGGGGCCGGAGACCCTGTACCCGTTTGACTTTGCGTACACGGAGGAGAATGGCTCCGTCCTC
CAGGTGGGGCGGAACATCACTAGAATTAAGCTGCTCGTCCGGAAATTCCTGCAGACTCAGGATGACCGGCCCTTTC
TTCTCTACGTGCGCTTCCACGACCCCCACCGCTGTGGGCACTCCCAGCCCCAGTACGGAACCTTCTGTGAGAAG
TTTGGCAACGGAGAGAGCGGCATGGGTGCTATCCAGACTGGACCCCCAGGCCTACGACCCACTGGACGTGCTG
GTGCCCTTACTTCGTCCCCAACACCCCGGCAGCCCCGAGCCGACCTGGCCGCTCAGTACACCACCGTCGGCCGCATG
GACCAAGGAGTTGGACTGGTGTCCAGGAGCTGCGTGACGCCGCTGTCTGAACGACACACTGGTGATCTTCACG
TCCGACAACGGGATCCCCCTTCCCCAGCGGCAGGACCAACCTGTACTGGCCGGGCACTGCTGAACCCTTACTGGTG
TCATCCCCGGAGCACCCAAAACGCTGGGGCCAAGTCAGCGAGGCCTACGTGAGCCTCCTAGACCTCACGCCCCACC
ATCTTGGATTGGTTCTCGATCCCGTACCCAGCTACGCCATCTTTGGCTCGAAGACCATCCACCTCACTGGCCGG
TCCCTCCTGCCGGCGCTGGAGGCCGAGCCCCCTCTGGGCCACCGTCTTTGGCAGCCAGAGCCACCACGAGGTCAAC
ATGTCTTACCCCATGCGCTCCGTGCAGCACCGGCACTTCCGCCTCGTGACAACTCAACTTCAAGATGCCCTTT
CCCATCGACCAGGACTTCTACGTCTACCCACCTTCCAGGACCTCCTGAACCGCACCACAGCTGGTCAGCCCACG
GGCTGGTACAAGGACCTCCGTCACTACTACTACCGGGCGCGCTGGGAGCTCTACGACCGGAGCCGGGACCCCCAC
GAGACCCAGAACCTGGCCACCGACCCGCGCTTTGCTCAGCTTCTGGAGATGCTTCGGGACCAGCTGGCCAAGTGG
CAGTGGGAGACCCACGACCCCTGGGTGTGCGCCCCCGACGGCGTCTGGAGGAGAAGCTCTCTCCCCAGTGCCAG
CCCCCTCCACAATGAGCTGTGACCATCCCAGGAGGCCTGTGCACACATCCCAGGCATGTCCCAGACACATCCACA
CGTGTCCTGTGGCCGGCCAGCCTGGGGAGTAGTGGCAACAGCCCTTCCGTCCCACTCCCATCCAAGGAGGGTT
CTTCCTTCTGTGGGGTCACTCTTGCCATTGCCTGGAGGGGGACCAGAGCATGTGACCAGAGCATGTGCCAGCC
CCTCCACCACCAGGGGCACTGCCGTATGGCAGGGGACACAGTTGTCTTGTGTCTGAACCATGTCCCAGCACGG
GAATTCTAGACATACGTGGTCTGCGGACAGGGCAGCGCCCCCAGCCCATGACAAGGGAGTCTTGTTTTCTGGCTT
GGTTTGGGGACCTGCAATGGGAGGCCTGAGGCCCTCTTCAGGCTTTGGCAGCCACAGATACTTCTGAACCCTTC
ACAGAGAGCAGGCAGGGGCTTCGGTGCCGCGTGGGCAGTACGCAGGTCCCACCGACACTCACCTGGGAGCACGGC
GCCTGGCTCTTACCAGCGTCTGGCCTAGAGGAAGCCTTTGAGCGACCTTTGGGCAGGTTTCTGCTTCTTCTGTTT
TGCCCATGGTCAAGTCCCTGTTCCCCAGGCAGGTTTTCAGCTGATTGGCAGCAGGCTCCCTGAGTGATGAGCTTGA
ACCTGTGGTGTCTTGGGCAGAAGCTTATCTTTTTTGAGAGTGTCCGAAGATGAAGGCATGGCGATGCCCGTCCT
CTGGCTTGGGTTAATTCTTCGGTGACACTGGCATTGCTGGGTGGTGATGCCCGTCTCTGGCTTGGGTTAATTCT
TCGGTGACACTGGCGTTGCTGGGTGGCAATGCCCGTCTCTGGCTTGGGTTAATTCTTCGGTGACACTGGCGTTG
CTGGGTGGCGATGCCCGTCTCTGGCTTGGGTTAATTCTTGGATGACGTCGGCGTTGCTGGGAGAATGTGCCGTT
CCTGCCCTGCCCTCCACCCACCTCGGGAGCAGAAGCCCGGCCTGGACACCCCTCGGCCTGGACACCCCTCGAAGGA
GAGGGCGCTTCTTGGAGTAGGTGGGCTCCCCTTGCCCTTCCCTCCCTATCACTCCATACTGGGGTGGGCTGGAGG
AGGCCACAGGCCAGCTATTGTAAAAGCTTTTT

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FIGURE 6

MSCPVPACCALLLVGLCRARPRNALLLLADDGGFESGAYNNSAIATPHLDALARRSLLFRNAFTSVSSCSPSRA
SLLTGLPQHONGMYGLHQDVHHFNSFDKVRSLPLLLSQAGVRTGIIGKKHVGPETVYPFDFAYTEENGSVLQVGR
NITRIKLLVRKFLQTQDDRPFFLYVAFHDPHRCGHSQPQYGTFCFKFGNGESGMGRIPDWTPQAYDPLDVLVPYF
VPNTPAARADLAAQYTTVGRMDQGVGLVLQELRDAGVLNDTLVIFTSDNGIPFPGRTNLYWPGTAEP LLVSSPE
HPKRWGQVSEAYVSLDLTPTILDWFSIPYPSYAIFGSKTIHLTGRSLLPALEAEPLWATVFGSQSHHEVTMSYP
MRSVQHRHFRVLVHNLNFKMPFPIDQDFYVSPTFQDLLNRTTAGQPTGWYKDLRHYYYRARWELYDRSRDPHETQN
LATDPRFAQLLEMLRDQLAKWQWETHDPWVCAPDGVLEEKLSPOCPLHNEL

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FIGURE 7

TATATTGGCAGTTATTGAGGGTAAAGCAATATATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATA
TTTTATTAAAAAATGAATTATAACCCATTTTCAGTTTTGCCTGCATCATAAGAGTGAGCACTCCATTGCTTTCTT
TCCTGGCCACACTGCTACAATCCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCACACT
GCCAGTGAAAAAGCTACGTCTTTACTGCATAAATTAGAGGAAGCAATTCGGAACAACGGAACCTTCAAACCTATA
AATACTGAATTATCGAACACTTGCCAGGCACTTCAGCAGAAGACAAGGAACTGAAGAAGCTTTTTAGATGAGGA
ATTTCCCTCACTATGATTCCCTGTCTGCGCAGATGCAATTCACCAACCTCTTCAAGAAAAATTGAAGCAGTGTTG
CCACAACTATATGGTGGTCAAGAAGCAAGAATACATCAGACACCCCTGACCTTGAAACATACGTGCTGGTACAC
ACCTCTGCTGGATGCTTATCTCTGGATAGTTTTACAGCAGTTCCAACCCCTGGAATCAACACCTTTCTCAGGTGT
AGCCAACCAATCCCACTCTGTGTGAAAGGCCACATATGGAGAAGTAAAGGATGGTGCTTTGGATGTAAAAAG
ACAACACAAGTGCCAGGCCCCACAAGTGGCCCCAGCCAGGAACGAATCTCTCAGGCTGCATCAGGATGAATGA
TGACCCAAGTATGGAAGAGAATGGTGTGTAACGCGTGTGTCTGAGAGCCTGCTGCAGTCCAGGGGATATTCCTC
ACTACCATTACCCAGACACACTTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAA
TATGGCTTCTTGTGACCTTGACAGAACTCGCTCTGTAAGAAAGAGGAGGATACAAGATCAGCTTCTCCACGAT
AGAGGCCCAAGGCACAAGTCCAGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATT
AAATCTGGAAGCCAAAGAGGAACCAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGT
TTCCCTCTTCTGTAAACCACTGTGAAATCGGTAAACGTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGA
GGTGGAGGCAGAATTTCTCAGATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAAGCT
TGAAGAGAGGTCCCGTGAAGTGGGCAGAAGAAAATTTGAAGAAAGAAATCACTAACTCTTTAAACTATTAGAGTC
TTTAACACCTCTGTGTGAAGATGACAACCAGGCACAGGAAATCATTAAGAAGCTGGAGAAGAGTATAAAGTTTCT
TAGCCAGTGTGCAGCACGAGTGGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTTAGTAA
AGCAGTTGAAGTGATGATTACGACAGTAGAAAACCTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGA
ACTGAAACAGGTTCTTCTGCAGAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTAAAAA
ACGTTACGTTCTCTAAACTCCAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGG
AAATGCAGGAATGGTGGCTGGGATGGAAAATAATGATCGATTAGTAGAAGGTCAGCAGTTGGCGTATTTTGGG
GTCAAAGCAGAGTGAACACCGTCCCTCATTACCTCGATTTATTAGCACCTATTCTGGGCAGATGCTGAAGAAGA
AAAATGTGAACATAAACTAAAGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAG
TCTTTCTGAAAAGAAAAATAATCCATCAAAGTGGGATGTCTCTTCAGTTTATGACACAATAGCTTCTGGGCAAC
AAATCTCAAGTCCCTCCATCAGAAAGGCTAATAAGGCCCTCTGGCTCTCTATTGCATTCAATTGTACTGTTTGCAGC
TTTGATGAGCTTCTCACAGGCCAATTATTCCAGAAGTCTGTGGATGCCGCTCCACACAGCAAGAGGACTCATG
GACGTCTCTAGAACATATCTTGTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTGTGACAGCAGGA
CATCCTAATATATGGATCTTGATTTTTAAGTTTCAGTATCTGAACTTCGTAAATTAGTAACTTTTAGCTGGGAAA
GTATAGCATGAAACCAGAGGTTCTCAGAATGACCGTAAGATAGCTTACATTTCTCTTTTTGCCTTTATCTCCCC
AACTAAAAATACAATGGG

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FIGURE 8

MESTPFSGVANQIHTLCERPTYGEVKDGDALDVKRQHKCPGPTSGPSPGTNLSGCIRMNDPSMEENGVERVCPES
LLQSRGYSSLPLPRHTSSTDGTITSSDPGLEILNMASCDLDRNSLCKKEEDTRSASPTIEAQGTSPAHDNIAFQD
STSKDKTILNLEAKEEPETIEEHKKEHASGDSVVSPLPVTTVKSVNVRQSENTSANEKEVEAEFLRLSLGFKCDW
FTLEKRVKLEERSRDWAEENLKKEITNSLKLLESITPLCEDDNQAQEI IKKLEKSIKFLSQCAARVASRAEMLGA
INQESRVSKAVEVMIQHVENLKRMYPKEHAELEELQVLLQNERSFNPLEDDDDCQIKKRSASLNSKPSSLRRVT
IASLPRNIGNAGMVAGMENNDRF SRRSSWRILGSKQSEHRPSLPRFISTYSWADAEKKCELKTKDDSEPSGEE
TVERTRKPSLSEKKNNPSKWDVSSVYDTIASWATNLKSSIRKANKALWLSIAFIVLFAALMSFLTGLFQKSVDA
APTQQEDSWTSLEHILWPFTRLRHNGPPP

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FIGURE 9

AGTAATTCCGGGAAGCTCGCCTTACAACCTCCGCGCGGCCTCGGCCCCCTGCGCCGCCCGCCCCACAACAAAACCTC
AGCGCAGCGCTCCCGGGCGCCCGGTTTCAGAGCGACCTGCGGCTCAGAGCGGAGGGGAGACTGACCGGAGCGCGGA
TCGGGACAGCGGCCGGGACAGCGGCGAGACGCGCGTGTGTGAGCGCGCCGGACCAAGCGGGCCAGAAAGCGGGTC
TGCAGCCCAGAGGGGCACCTTCTGCAAACATGTTCTGTGGATCCCCTATCCAGCAAAGCTCTAAAGATCAAGCGAGA
GCTGAGCGGAGAACACGCCGCACCTGTTCGGACGAGGCGCTGATGGGGCTGTTCGGTTCGCGGAGCTGAACCGGCATCT
GCGCGGGCTCTCCGCCGAGGAGGTGACACGGCTCAAGCAGCGGCGCCGCACACTCAAAAACCGTGGCTACGCCGC
CAGCTGCCGCGTGAAGCGCGTGTGCCAGAAGGAGGAGCTGCAGAAGCAGAAGTCGGAGCTGGAGCGCGAGGTGGA
CAAGCTGGCGCGCGAGAACGCCGCCATGCGCCTGGAGCTCGACGCGCTGCGCGGCAAGTGGAGGCGCTGCAGGG
CTTCGCGCGCTCCGTGGCCGCCGCCCGCGGGCCCCGCCACGCTCGTGGCGCCGGCCAGCGTCATCACCATCGTCAA
GTCCACCCCCGGGCTCGGGGTCTGGCCCCGCCACGGCCCCGACCCCCGCCACGGCCCCGGCCTCCTGCTCCTAGTG
CCCCCCCCGCCATGCCTCAGCCACGCCCCCTCCGGCCTCAGCTCCCTCCCCAAAGTGCCTGAGCGCCGCCTCTGT
GCCAGGTCCCATTCTCTGCGACTGGCCCCCTTGGTGCACACACATTCCCTTCGTGGGGCCCTGTCTTCTCTT
GCAGCCCCCAAACCTGGGACCGAATGACCCTGGGAAGGGGAACCTGGGTAGGTTGGGGATGGGGCAGAGGTCTGG
ATCTGGGATCGCCCTTGGCTGAAAGTTTAGCCTTTTTAGATTGAGAGATACAGAGCCGGCTTAGAGAACAGCTGT
TGGGGGAGAAGAGGGGCACCCCTCATCTTGGAACTGCTCTTATTGTGCCAATATGCCCTCCAAACCCTCCCAGGA
TTCAAAGCTAGGTTTGGCTGTCTGTGACTTACGGGACCGTCTCTGCTGAGAAATTGCACTGAAGAGATGCCCCAC
CTCTGGTTGGGCTTGGGGTGCCTGGCCTTCCGAACTAAAAGAGTGGGTGGGAAGACTAGTGAACCCAGTTCA
CGGATGGGGAAACAGGCCTGAGGTACATTTCACTTAGTGGTTGTGTTGGGACCAAACCTGGGTGTCTCACTG
CTGCCCTGAGTCCAGCCATGGTTTTCAGGGGGACAGTGGACAGGGACTCAGAAATGTGGTGGGAGGGCCTCCCTG
GCTTGGGAGACCGCTCTCTGCAAGGGAGGGGGAGAGAAGCAGAGGGAGAGAGAAGGTGACACGGATGGAAGAGTG
GGAAGGAGCTGGCCTGGCTCAGCCCTAGGCTGTCCCTGCAGCCAGGGTGTCCGGGGGCTGGCCAGTCAGAGAAAG
GGGGCCATGGACTGCTGTGGCAAATAGGGAGACAAGGAGACAGACCCTGCAGTCCTACTACAGTCTGGAGTGGGG
TCCTAAGAAGAAGGGTCCCACCTCAACCCCTGTCACTGTCCACTGTGGGGTGGGGGCTGACCCCTGCCTTTGATT
GTCATTCTCCTGGGAAGCCCAGTCTCAGTCCCTCCCCAACACTGTCCACACTGCCCCCTCCCCACTGTTTATTTA
TTGCACGGATCTAAGTTATTCTCCCCAGCCAGAGCCGAGCTCCTGCTCCCTGGGAAAAGTGGCGTATGGCCCTG
AGCTGGGCTTTATATTTTATATCTGCAAATAAATCACATTTTATCTTATATTTAGGGAAAGCCGGAGAGCAACAA
CAAAAAATGTTTAAGCCGGGCGCGGTGGCTCACATCTGTAATCCCAGCACTTTGGGAGTCCAAGGAGGGGGATCG
CTTGAGTCCAGGAGTTTGAGACCAGCCTGGACAACATGGTGAAACCCCGTCTCTACAAAAAATACAAAAATTAGC
CATGCATGGTGGCTCATGCCTGTAGTCCAGCTACTTGGGAGGCTGAGGCAGGAGGATCACTTAAGCCCAGAAGG
CAGAGGTTGTAGTGAGCTGAGATCGCACCCTGCACTCCAGCCTGGGCAACATAGCAAAATCCTGTCTCAAAAAA
AAAGTTAAAAAATATTGCCCGGCTCCTAGAATTTATTTATTTCTGACTTACAGCAAGCGAGTTATCGTCTTCTG
TATTTTGTAGACTTTCTAAATAAAGTCAAATTCCTTTCTTTTCCACAGAGAAAAAA

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FIGURE 10

MSVDPLSSKALKIKRESENTPHLSDEALMGLSVRELNRHLRGLSAEEVTRLKQRRRTLKNRGYAASCRVKRVCQ
KEELQKQKSELEREVDKLARENAAMRLELDALRGKCEALQGFARSVAAARGPATLVAPASVITIVKSTPGSGSGP
AHGPDPAHGPASCS

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FIGURE 11

ACGCGTCCGCTTCGGAATGAGAGACTCAACCATAATAGAAAGAATGGAGAACTATTAACCACCATTCTTCAGTGG
GCTGTGATTTTCAGAGGGGAATACTAAGAAATGGTTTTCCATACTGGAACCCAAAGGTAAAGACACTCAAGGACA
GACATTTTTGGCAGAGCATAGATGAAAATGGCAAGTTCCCTGGCTTTCTCTGCTCAACTTTTCATGTCTCCCTC
TTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCTCTGGGCCCATCCTGGCCATG
GTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGGTG
AGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGGAAAGACAGGCAGAGTGCACCATAT
CGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTCACAGCC
TCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAGCTGAAGGTT
GCAGCATTGGGTCTGATCTTCACATTGAAGTGAAGGGTTATGAGGATGGAGGGATCCATCTGGAGTGCAGGTCC
ACTGGCTGGTACCCCCAACCCCAAATAAAGTGGAGCGACACCAAGGGAGAGAACATCCCGGCTGTGGAAGCACCT
GTGGTTGCAGATGGAGTGGGCCCTGTATGCAGTAGCAGCATCTGTGATCATGAGAGGCAGCTCTGGTGGGGGTGTA
TCCTGCATCATCAGAAATTCCTCTCGGCCCTGGAAAAGACAGCCAGCATATCCATCGCAGACCCCTTCTTCAGG
AGCGCCAGCCCTGGATCGCGGCCCTGGCAGGGACCCTGCCTATCTCGTTGCTGCTTCTCGCAGGAGCCAGTTAC
TTCTTGTGGAGACAACAGAAGGAAAAAATTGCTCTGTCCAGGGAGACAGAAAAGAGAGCGAGAGATGAAAGAAATG
GGATACGCTGCAACAGAGCAAGAAATAAGCCTAAGAGAGAAGCTCCAGGAGGAACCTCAAGTGGAGGAAAATCCAG
TACATGGCTCGTGGAGAGAAAGTCTTTGGCCTATCATGAATGGAAAATGGCCCTCTTCAAACCTGCGGATGTGATT
CTGGATCCAGACACGGCAAACGCCATCCTCCTTGTCTGAGGACCAGAGGAGTGTGCAGCGTGTGAAGAGCCG
CGGGATCTGCCAGACAACCCCTGAGAGATTTGAATGGCGTTACTGTGTCCTTGGCTGTGAAAACCTTCACATCAGGG
AGACATTACTGGGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGG
AAAAAAGGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCCTGACTGATGGGAATAAGTATCGG
GCTCTCACTGAGCCCAGAACCAACCTGAACTTCTGAGCCTCCTAGGAAAGTGGGGATCTTCTGGACTATGAG
ACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTTCCGCACGCCCTCTTCTCTGAG
CCTCTATATCCTGTTTTGAGAAATTTGACCTTGGAGCCCACTGCCCTGACCATTTGCCCAATACCAAAGAAGTA
GAGAGTTCCCCGATCCTGACCTAGTGCTGATCATTCCCTGGAGACACCACTGACCCCGGGCTTAGCTAATGAA
AGTGGGGAGCCTCAGGCTGAAGTAACATCTCTGCTTCTCCCTGCCCACCCTGGAGCTGAGGTCTCCCTTCTGCA
ACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTTACTGATATTTCATTCCATTATTCATATGA
CAGTTGTTTTGAGTTTCGTACCACCTTATTGTCCCTTATACAGATAAGGAAACTGGGGTGCAGAAAGGTGAATT
AACTTTACAAAGTAGACATGACAAGTGAACAGCAGAGCTGGGATCTAAACAGCAATAACTAACATTAACAGAGAA
TTTAAATGTTCTTAGTGCTGTGTTATAAGCTTTGGTGGATGTCACTCCTTTAATCCTCACAACACCCTGTCCGG
TAGTCATATTTTGCAAGTATGGAAGCTGAGGCAGGGCAACATGAAGTAACTTACATAATTCATACAGTAATTTGT
GCAGTTGGGAGATGTTTACGCTTAGTCCCTGGCTAATTGCCTGTTCTTTTCCAGCCTGATTTTTTTTCCACAGG
AAGAGCCCATGTAGCCCTGAGGTTTCTTCCCAGGACAGCTGCAGGGTAGAGATCATTTTAAGTGCTTGTGGA
GTTGACATCCCTATTGACTCTTTCCAGCTGATATCAGAGACTTAGACCCAGCACTCCTTGGATTAGCTCTGCAG
AGTGTCTTGGTTGAGAGAATAACCTCATAGTACCAACATGACATGTGACTTGGAAAGAGACTAGAGGCCACACTT
GATAAATCATGGGGCACAGATATGTTCCCAACCAAAATGTGATAAGTGATTGTGCAGCCAGAGCCAGCCTTCC
TTCAATCAAGGTTTCCAGGCAGAGCAAATACCTAGAGATTCTCTGTGATATAGGAAATTTGGATCAAGGAAGCT
AAAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAATAGGTCTGTCCACTCCTGGTCA
TTGGTGGATGTTAAACCCATATTCCTTTCAACTGCTGCCTGCTAGGGAAAAGTCTCCTCATTATCATCACTATT
ATTGCTCACCAGTGTATCCCTCTACTTGGCAAGTGGTTGTCAAGTTCTAGTTGTTCAATAAATGTGTTAATAAT
GAAAAA

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FIGURE 12

MKMASSLAFLLLNFHVSFLVQLLTPCSAQFSVLGFSGPILAMVGEDADLPCHLFPTMSAETMELRWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDYFYEKALVELKVAALGSDL
HIEVKGYEDGGIHLECRSTGWYPQPQIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIMRGSSGGGVSCIIRNS
LLGLEKTASISIADPFFRSAQPWIAALAGTLPISLLLLAGASYFLWRQQKEKIALSRETEREREMKEMGYAATEQ
EISLREKLQEELKWRKIQYMARGEKSLAYHEWKMALEFKPADVILDPDTANAILLVSEDQRSVQRAEEPRLPDNP
ERFEWRYCVLGCENFTSGRHYWEVEVGDRKEWHIGVCSKNVERKKGWVKMTPENGYWTMGLTDGNKYRALTEPRT
NLKLPEPPPRKVGIFLDYETGEISFYNDGSHIYTFPHASFSEPLYPVFRILTLEPTALTICPIPKEVESSPDPD
LVPDHSLETPLTPGLANESGEPQAEVTSLLLPAHPGAEVSPSATTNQNHKLQARTEALY

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FIGURE 13A

CCGGGCTGCGCGGCGAGGCTGAGCCGGGCCCCGGGCGCCGGGGCCGGGGGCGGCTGGCGCGGGCAGGAAGCGCCTC
GCGGACCCGGGCCCCGCCCCCGCTCCCGCCGCCTCCGGGCTCCCGGCTCCCGGCCGCGCCTCGCCCCATGCACT
CGCCGCGCCGCGCAGCCCCGCGCACGCCCGGATGGCTCCTCGCGCCGCGGGGCGCGCACCCCTTAGCGCCCGGGCC
GCCGCCGCCAGCCCCCGCCGTTCAGACGCCCGCGCGGTGCCCGGTGCCGCTGCTGTTGCTGCTGCTCCTGGGG
GCGGCGCGGGGCGGGCGCCCTGGAGATCCAGCGTCGGTTCCCTCGCCACGCCCACCAACAACCTTCGCCCTGGAC
GGCGCGGGGGACCGTGACCTGGCGGCCGTCAACCGCCTCTATCAGCTGTCGGGCGCCAACCTGAGCCTGGAG
GCCGAGGCGGGCGTGGGCCCGGTGCCGACAGCCCGCTGTGTACGCTCCGACGCTGCCGAGGCCTCGTGCGAG
CACCCGCGGGCGCCTACGGACAACATAACAAGATCCTGCAGCTGGACCCCGGCCAGGGCCTGGTAGTCGTGTGC
GGGTCCATCTACCAGGGCTTCTGCCAGCTGCGGCGCCGGGTAAACATCTCGGCCGTGGCCGTGCGCTTCCCGCCC
GCCGCGCCGCCCGCGAGCCCGTACGGTGTTCCTCAGCATGCTGAACGTGGCGGCCAACACCCGAACCGCTCC
ACCGTGGGGCTAGTTCTGCCTCCCGCCGCGGGCGCGGGGGGAGCCGCTGCTCGTGGGCGCCACGTACACCGGT
TACGGCAGCTCCTTCTCCCGCGCAACCGCAGCCTGGAGGACCACCGCTTCGAGAACACGCCCCGAGATCGCCATC
CGTCCCTGGACACGCGCGGCGACCTGGCCAAGCTCTTACCTTCGACCTCAACCCCTCCGACGACAACATCCTC
AAGATCAAGCAGGGCGCCAAGGAGCAGCACAAGCTGGGCTTCGTGAGCGCCTTCTGCAACCCGTCCGACCCGCCG
CCGGGTGCACAGTCTACGCGTACCTGGCGCTCAACAGCGAGGCGCGCGGGGCGACAAGGAGAGCCAGGCGCGG
AGCCTGCTGGCGCGCATCTGCCTGCCCCACGGCGCCGGCGGCGACGCCAAGAAGCTCACCGAGTCTACATCCAG
TTGGGCTTGACGTGCGCGGGCGGCGGGCCGCGGCGACCTCTACAGCCGCTGGTGTGGTCTTCCAGCCCGG
GAGCGGCTCTTTGCTGTCTTCGAGCGGCCCCAGGGGTCCCCCGCGGCCCGCGCTGCTCCGGCCGCACTCTGCGCC
TTCCGCTTCGCGGACGTGCGAGCCGCCATCCGAGCTGCGCGCACCGCCTGCTTCGTGGAACCGGCGCCCGACGTG
GTGGCGGTGCTCGACAGCGTGGTGCAGGGCACGGGACCGCCTGCGAGCGCAAGCTCAACATCCAGCTCCAGCCA
GAGCAGCTGGACTGTGAGCTGCTACCTGCAGCACCCGCTGTCCATCCTGCAGCCCTGAAGGCCACGCCCCGTG
TTCCGCGCCCCGGGCTCACCTCCGTGGCCGTGGCCAGCGTCAACAACCTACACAGCGGTCTTCTGGGCACGGTC
AACGGGAGGCTTCTCAAGATCAACCTGAACGAGAGCATGCAGGTGGTGAAGCGGGTGGTGAAGTGTGGCCTAT
GGGGAGCCCGTGCACCATGTGCAGTTTGACCCAGCAGACTCCGTTTACCTTTACCTGATGACGTCCACCAG
ATGGCCAGGGTGAAGGTGCGCCGCTGCAACGTGCACTCCACCTGTGGGGACTGCGTGGGTGCGGCGGACGCCTAC
TGCGGCTGGTGTGCCCTGGAGACGCGGTGCACCTTGACGAGGACTGCACCAATTCCAGCCAGCAGCATTTCTGG
ACCAGTGCCAGCGAGGGCCCCAGCCGCTGTCTCCTGCCATGACCGTCCCTGCCTTCCGAGATCGATGTGCGCCAGGAG
TACCCAGGCATGATCCTGCAGATCTCGGGCAGCCTGCCAGCCTCAGTGGCATGGAGATGGCCTGTGACTATGGG
AACAACATCCGCACTGTGGCTCGGGTCCCAGGCCCTGCCTTTGGTCAACAGATTGCCTACTGCAACCTCCTGCCG
AGGGACCAGTTTCCGCCCTTCCCCCCCCAACCAGGACCACGTGACTGTTGAGATGTCTGTGAGGGTCAATGGGCGG
AACATCGTCAAGGCCAATTTACCATCTACGACTGCAGCCGCACTGCACAAGTGTACCCCCACACAGCCTGTACC
AGCTGCCTGTGCGCACAGTGGCCCTGTTTCTGGTGCAGCCAGCAGCACTCCTGTGTTTCCAACCAGTCTCGGTGC
GAGGCTCACCAAACCCACGAGCCCTCAGGACTGCCCCCGGACCCGTGCTCTACCCCTGGCACCCGTGCCTACG
GGTGGCTCCCGAAGATCCTGGTGCCTCTGGCCAACTGCGCTTTTCCAGGGTGCAGCCCTGGAGTGTAGTTTT
GGGCTGGAGGAGATCTTCGAGGCTGTGTGGGTGAATGAGTCTGTTGTACGCTGTGACCAGGTGGTGTGACACG
ACCCGGAAGAGCCAGGTGTTCCCGCTCAGCCTCAAATAAAGGGGCGGCCAGCCGATTCTGGACAGCCCTGAG
CCCATGACAGTCATGGTCTATAACTGTGCCATGGGCAGCCCCGACTGTTCCAGTGCCTGGGCCGCGAAGACCTG
GGTCACTGTGCATGTGGAGTGATGGCTGCCGCTGCGGGGGCTCTGCAGCCATGGCTGGCACCTGCCCCGCC
CCCAGATCCGCGCGATTGAGCCCTGAGTGGCCCGTTGGACGGTGGGACCTGCTGACCATCCGAGGAAGGAAC
CTGGGCCGCGGCTCAGTGACGTGGCCACGGCGTGTGGATTGGTGGTGTGGCCTGTGAGCCACTGCCTGACAGA
TACACGGTGTGCGAGGAGATCGTGTGTGTACAGGGCCAGCCCCAGGACCACTCTCAGGTGTGGTGAACGTGAAC
GCCTCTAAGGAGGGCAAGTCCCGGGACCGCTTCTCCTACGTGCTGCCCTGGTCCACTCCCTGGAGCCTACCATG
GGCCCCAAGGCCGGGGGACCAAGGATACCATCCATGGGAATGACCTCCATGTAGGCTCCGAGCTCCAGGTCTGTG
GTGAACGACACAGACCCCTGCACGGAGCTGATGCGCACAGATAACAGCATCGCCTGCACCATGCCTGAGGGGGCC
CTGCCGGCTCCGGTGCCGTGTGTGTGTGCGCTTCGAGCGTCGGGGCTGCGTGCACGGCAACCTCACCTTCTGGTAC
ATGCAGAACCCGGTCATCACGGCCATCAGTCCCCGCGCAGCCCTGTGAGTGGCGGCAGGACCATCACAGTGGCT
GGTGAAGCGTTTCCACATGGTGCAGAATGTGTCCATGGCCGTCCACCACATTGGCCGGGAGCCCAGCTCTGCAAG
GTTCTCAACTCCACCCCTCATCACCTGCCCGTCCCCGGGGCCCTGAGCAACGCATCAGCGCCAGTGGACTTCTTC

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FIGURE 13B

ATCAATGGGCGGGCCTACGCAGACGAGGTGGCTGTGGCTGAGGAGCTACTGGACCCCGAGGAGGCACAGCGGGGC
AGCAGGTTCCGCGCTGGACTACCTCCCCAACCCACAGTTCTCTACGGCCAAGAGGGAGAAGTGGATCAAGCACCAC
CCCGGGGAGCCTCTCACCCCTCGTTATCCACAAGGAGCAGGACAGCCTGGGGCTCCAGAGTCACGAGTACCGGGTC
AAGATAGGCCAAGTAAGCTGCGACATCCAGATTGTCTCTGACAGAATCATCCACTGCTCGGTCAACGAGTCCCTG
GGCGCGGCCGTGGGGCAGCTGCCCATCACAATCCAGGTAGGGAACCTCAACCAGACCATCGCCACACTGCAGCTG
GGGGTAGCGAGACGGCCATCATCGTGTCCATCGTCATCTGCAGCGTCCCTGCTGCTGCTCTCCGTGGTGGCCCTG
TTCGTCTTCTGTACCAAGAGCCGACGTGCTGAGCGTTACTGGCAGAAGACGCTGCTGCAGATGGAGGAGATGGAA
TCTCAGATCCGAGAGGAAATCCGCAAAGGCTTCGCTGAGCTGCAGACAGACATGACAGATCTCACCAAGGAGCTG
AACCGCAGCCAGGGCATCCCCTTCCCTGGAGTATAAGCACTTCGTGACCCGCACCTTCTTCCCCAAGTGTTCTCTCC
CTTTATGAAGAGCGTTACGTGCTGCCCTCCAGACCCCTCAACTCCCAGGGCAGCTCCAGGCACAGGAAACCCAC
CCACTGCTGGGAGAGTGGAAAGATTCTTGAGAGCTGCCGGCCCAACATGGAAGAGGGAATTAGCTTGTTCTCTCTCA
CTACTCAACAACAAGCACTTCTCATCGTCTTTGTCCACGCGCTGGAGCAGCAGAAGGACTTTGCGGTGCGCGAC
AGGTGCAGCCTGGCCTCGCTGCTGACCATCGCGCTGCACGGCAAGCTGGAGTACTACACCAGCATCATGAAGGAG
CTGCTGGTGGACCTCATTGACGCTCGGCCGCCAAGAACCCCAAGCTCATGCTGCGGCGCACAGAGTCTGTGGTG
GAGAAGATGCTCACCAACTGGATGTCCATCTGCATGTACAGCTGTCTGCGGGAGACGGTGGGGGAGCCATTCTTC
CTGCTGCTGTGTGCCATCAAGCAGCAAATCAACAAGGGCTCCATCGACGCCATCACAGGCAAGGCCCGCTACACA
CTCAATGAGGAGTGGCTGCTGCGCGAGAACATCGAGGCCAAGCCCCGGAACCTGAACGTGTCTTCCAGGGCTGT
GGCATGGACTCGCTGAGCGTGGGGCCATGGACACCGACACGCTGACACAGGTCAAGGAGAAGATCCTGGAGGCC
TTCTGCAAGAATGTGCCCTACTCCAGTGGCCGCGTGCAGAGGACGTCGACCTTGAGTGGTTTCGCTCCAGCACA
CAGAGCTACATCCTTCGGGACCTGGACGACACCTCAGTGGTGGAAGACGGCCGCAAGAAGCTTAACACGCTGGCC
CATTACAAGATCCCTGAAGGTGCCTCCCTGGCCATGAGTCTCATAGACAAGAAGGACAACACACTGGGCCGAGTG
AAAGACTTGGACACAGAGAAGTATTTCCATTTGGTGCTGCCTACGGACGAGCTGGCGGAGCCCCAAGAAGTCTCAC
CGGCAGAGCCATCGCAAGAAGGTGCTCCCGGAAATCTACCTGACCCGCTGCTCTCCACCAAGGGCAGCTTGCAG
AAGTTTCTGGATGACCTGTTCAAGGCCATTCTGAGTATCCGTGAAGACAAGCCCCACTGGCTGTCAAGTACTTT
TTCGACTTCTGGAGGAGCAGGCTGAGAAGAGGGGAATCTCCGACCCCGACACCCTACACATCTGGAAGACCAAC
AGCCTTCTCTCCGTTCTGGGTGAACATCCTGAAGAACCCCCAGTTTGTCTTTGACATCGACAAGACAGACCAC
ATCGACGCTGCTTTTCAAGTATCGCGCAGGCCTTCATCGACGCTGCTCCATCTCTGACCTGCAGCTGGGCAAG
GATTCGCCAACCAACAAGCTCCTCTACGCCAAGGAGATTCTGAGTACCGGAAGATCGTGCAGCGCTACTACAAG
CAGATCCAGGACATGACGCCGCTCAGCGAGCAAGAGATGAATGCCCATCTGGCCGAGGAGTCGAGGAAATACCAG
AATGAGTTCAACACCAATGTGGCCATGGCAGAGATTTATAAGTACGCCAAGAGGTATCGGCCGAGATCATGGCC
GCGCTGGAGGCCAACCCACGGCCCGGAGGACACAAGTTCGAGCACAAGTTTGAGCAGGTGGTGGCTTTGATGGAG
GACAACATCTACGAGTGCTACAGTGAGGCCTTGAGACACATGGAGAGTTGGTCAGGCTGCTGCTGGGAGAAATGGA
CGCCCACTGGGCCTCAACTTGATCTTCTACCCCGTGCCTGTGACTCAGACTGGGAAATACTGAGCAGAGACGGCT
GGGGCGGGGGCAGGAGGAGGGGCTGCTCTCTGAGACAGGGGCGCCCCCGCTTGACCCCTGGGCACCTCCATCCC
CTCCCACCTGTCCCCAGATCAGTCTCTGGGATGGAGGCCAGAGAGCTGGTCAGGCTCCCCCATCTGCCCAGCACG
GCCTGCACTGTGCCCACCCACTTGCTCCACAACGTCCAGTTGGTCCCTGCTGCCAAGAGCCCCGTGCATCCAGGCG
GCCAAGCACAACTGGGGGAGAGGAGGCCGCCAGCCCGGAGGCTGCAGCCCAGAACTCTACCTCATCCACACTG
GTGCAGGGAGCCCTCCTTGAAGTACCTTTGATTGGTTTCTGCTTCAACTACCAAAATGTTATCTCCACTTCCCC
CTCAGCCGTAGAGGATCCTGGCCACAGACAGTTTCAAGTAGTGTCAGATTTTTGTTGCTTGGGCGGCTGTTGGTA
GAGTGGGCAGTGGCCGCGCATGGGGTGCTCTGTGGGCTTCTCCAGGAGCAGGGAGGGTGGAGGGGAGGGATGGG
GGGCACAGGAGCTGGGAGCCCCGTCTCCAGGAAAAGGAGAGGGGTTAAGATGCACCGAGGCTGTAGCTGGGCTAC
TTGATCTTGCTGAAAAGTGTTTCTAAAGATAGCACCACTTTTTTTTTTAAAGCTTTTATATATTAATAAACGTATC
ATGC

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FIGURE 14

PGCAARLSRARAPGPGAAGAGRKRLADPGPPPASRRLRAPGSRPRLAPCTRRAAQPAHARMAPRAAGGAPLSARA
AAASPPPFQTPPRCPVPLLLLLLLLGAARAGALEIQRRFSPPTPTNNFALDGAAGTVYLAAVNRLYQLSGANLSLE
AEAAGVPVPDPSPLCHAPQLPQASCEHPRRLTDNYNKILQLDPGQGLVVVCGSIYQGFCQLRRRGNISAVAVRFPP
AAPPAEPVTVFPSMLNVAANHPNASTVGLVLPPAAGAGGSRLLVGATYTYGYSSFFPRNRSLEDHRFENTPEIAI
RSLDTRGDLAKLFTFDLNP SDDNILKIKQGAKEQHKLGFS AFLHPSDPPPGAQSYAYLALNSEARAGDKESQAR
SLLARICLPHGAGGDAKKLTESIQLGLQCAGGAGRGDLYSRLVSVFPARERLFAVFERPQGS PAARAAPAALCA
FRFADVRAAIRAARTACFVEPAPDVVAVLDSVVQGTGPACERKLNILQPEQLDCGAHLQHPLSILQPLKATPV
FRAPGLTSVAVASVNNYTAVFLGTVNGRLLKINLNESMQVVSRRVTVAYGEPVHHVMQFDPADSVYLYLMTSHQ
MARVKVAACNVHSTCGDCVGAADAYCGWCALETRCTLQQDCTNSSQQHFWTSASEGPSRCPAMTVLPSEIDVRQE
YPGMILQISGSLPSLSGMEMACDYGNIRTVARVPGPAFGHQIAYCNLLPRDQFPFPFNQDHVTVEMSVRVNGR
NIVKANFTIYDCSRTAQVYPHTACTSCLSAQWPCFWCSQQHSCVSNQSRCEASPNPTSPQDCPRTL SLPAPVPT
GCSQNILVPLANTAFFQGAALCESFGLLEIFEAVVWNESVVRCDQVVLHTRKSQVFPLSLQLKGRPARFLDSPE
PMTVMVYNCAMGSPDCSQCLGREDLGHL CMWSDGCR LRGP LQPMAGTCPAPEIRAIEPLSGPLDGGTLLTIRGRN
LGRRLSDVAHGVWIGGVACEPLPDRTVTVSEEIVCVTGPAPGPLSGVTVNASKEGKSRDRFSYVLPLVHSLEPTM
GPKAGGTRITIHGNDLHV GSELQVLVNDTDPCTELMRTDTSI ACTMPEGALPAPVPVCVR FERRGCVHGNLTFWY
MQNPVITAI SPRRSPVSGGRTITVAGERFHMVQNVSMVHHIGREPTLCKVLNSTLITCSPGALS NASAPVDF
INGRAYADEVAVAEELLDPEEAQRGSRFRDL YLPNPQFSTAKREKWKHHHPGEPLTLVIHKEQDSLGLQSHEYRV
KIGQVSCDIQIVSDRIIHCSVNESLGA AVGQLPITI QVGNFNQTIATLQLGGSETAIIVSIVICSVLLLLSVVAL
FVFCTKSRRARYWQKTLLQMEEMESQIREEIRKGFAELQTDMDLTKELNRSQGIPFLEYKHFVTRTFFPKCSS
LYEERYVLPSQTLNSQGSSQAQETHPLLGEWKIPESCRPNMEEGISLFSLLNNKHFLIVFVHALEQQKDFAVRD
RCSLASLLTIALHGKLEYYSIMKELLVDLIDASA AKNPKMLLRRTESVVEKMLTNWMSICMYSCLRETVGEFFF
LLLCAIKQQINKGSIDAITGKARYTLNEEWLLRENIEAKPRNLNVSFQCGMDSLSVRAMD TDLTQVKEKILEA
FCKNV PYSQWPRAEDVDLEWFASSTQSYILRDLDTSVVEDGRKKLNTLAHYKIPEGASLAMS LIDKKDNTLGRV
KDLDEKYFHLVLP TDELAEPKKSHRQSHRKKVLP EIIYLTRLLSTKGT LQKFLDDL FKA ILSIREDKPPLAVKYF
FDFLEEQA EKRGISDPDTLHIWKTNSLPLRFVWNILKNPQFVFDIDKTDHIDACLSVIAQAFIDACSIDLQLGK
DSPTNKLLYAKEIPEYRKIVQRYKQIQDMTPLSEQEMNAHLAEESRKYQNEFNTNVAMAEIYKYAKRYRPQIMA
ALEANPTARRTQLQHKFEQVVALMEDNIYECYSEA

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FIGURE 15A

CCCTTTTTCCTCCCCTTTTGAAGAGACAATGCTACTTCAGTTTGGAGCACAAACATATGATCAGCACATGGAAAT
GTGGTAATTCGGATGCATTTCGTGATTGCAACAGATTGAAGAAATTAGACCAGACAAAGAGTGTTTTTAGAGGAGA
GAGGAGGAGGAGGAGGCTGAGAGAGGGAGGGCGACGGGGGTGAGAAAGGGGAGGCCGCTCTGAGCGGGACGCCG
GGACTCCCGCCGCTGCTAAATATATCCGTAGAATGGAGAGGGACCGGATCTCAGCCTTGAAAAGATCTTTTGAGG
TCGAGGAGGTTCGAGACACCCAACCTCCACCCACCCCGGAGGGTCCAGACTCCCCTACTCCGAGCCACTGTGGCCA
GCTCCACCCAGAAATTCAGGACCTGGGCGTGAAGAACTCAGAACCTCGGCCCCGATGTGGACTCCCTAAGCC
AACGCTCCCCCAAGGCGTCCCTGCGGAGGGTGGAGCTCTCGGGCCCCAAGGCGGCCGAGCCGGTGTCCCGGCGCA
CTGAGCTGTCCATTGACATCTCGTCCAAGCAGGTGGAGAACGCCGGGGCCATCGGCCCCGTCCCGGTTCCGGGCTCA
AGAGGGCCGAGGTGTTGGGCCACAAGACGCCAGAACCGGCCCTCGGAGGACGGAGATCACCATCGTCAAACCCC
AGGAGTCAGCCACCGGAGGATGGAGCCCCCTGCCTCCAAGGTCCCCGAGGTGCCACTGCCCTGCCACCGACG
CAGCCCCAAGAGGGTGGAGATCCAGATGCCAAGCCTGCTGAGGCGCCACCGCCCCAGCCCAGCCCAGACCT
TGGAGAATTCAGAGCCTGCCCTGTGTCTCAGCTGCAGAGCAGGCTGGAGCCCAAGCCCCAGCCCCCTGTGGCTG
AGGCTACACCCCGGAGCCAGGAGGCCACTGAGGCGGCTCCAGCTGCGTTGGCGACATGGCCGACACCCCCAGAG
ATGCCGGGCTCAAGCAGGCGCTGCATCACGGAACGAGAAGGCCCGGTGGACTTCGGCTACGTGGGGATTGACT
CCATCCTGGAGCAGATGCGCCGGAAGGCCATGAAGCAGGGCTTCGAGTTCAACATCATGGTGGTGGGCGAGAGCG
GCTTGGGTAAATCCACCTTAATCAACACCTCTTCAAATCCAAAATCAGCCGGAAGTCGGTGCAGCCACCTCAG
AGGAGCGCATCCCCAAGACCATCGAGATCAAGTCCATCACGCACGATATTGAGGAGAAAGGCGTCCGGATGAAGC
TGACAGTGATTGACACACCAGGGTTCGGGGACCACATCAACAACGAGAAGTGTGGCAGCCCATCATGAAGTTCA
TCAATGACCAGTACGAGAAATACCTGCAGGAGGAGGTCAACATCAACCGCAAGAAGCGCATCCCGGACACCCGCG
TCCACTGCTGCCTCTACTTCATCCCCGCCACCGGCCACTCCCTCAGGCCCTGGACATCGAGTTTATGAAACGCC
TGAGCAAGGTGGTCAACATCGTCCCTGTCTCATCGCCAAGGCGGACACACTCACCTGGAGGAGAGGGTCCACTTCA
AACAGCGGATCACCGCAGACCTGCTGTCCAACGGCATCGACGTGTACCCCCAGAAGGAATTTGATGAGGACTCGG
AGGACCGGCTGGTGAACGAGAAGTTCCGGGAGATGATCCATTGCTGTGGTGGGCGAGTGACCACGAGTACCAGG
TCAACGGCAAGAGGATCCTTGGGAGGAAGACCAAGTGGGGTACCATCGAAGTTGAAAACACCACACACTGTGAGT
TTGCCTACCTGCGGGACCTTCTCATCAGGACGCACATGCAGAACATCAAGGACATCACCAGCAGCATCCACTTCG
AGGCGTACCGTGTGAAGCGCCTCAACGAGGGCAGCAGCGCCATGGCCAACGGCGTGGAGGAGAAGGAGCCAGAAG
CCCCGGAGATGTAGACGCCCCCTGCCACCCCCGGGATCCTGCCCCCAAGTCATTTCCGTCCCCCCCCCAGGCC
TCCCACACCCCATTTTATTTTATATGATTTTCTCCATTTGTCTATCGTTCCCCACCCCTTCGACATGCTGCCAGG
AAACAAGGGAAGGGGCTCCCTCCGAGTGAGTCAGTGATGAGGCCGCGGCTCCCCGAGGTTGTGGGGAGGCTGC
ACTGGAGCCACAGGCAGGGGTGAGAGCACCCACTGAATTGACATGACCCTCTGTCCCCAGGCCTGGCTCCCCGAG
GGCTCAGAAGAGCAGCTTCGGTGTGCAGATCATCCGTGCTGTGGGGTTCTCAGTGCCGGAGCTTGGGGTGGGGC
CAGGCCTCGCACTTGCAAGGAGGCCAGTGGGCTGCACGCTCCCCCTCCATCCCCATCGGCCCTGTCCCTGGAGT
GTGTGAGAGCCAGGGGAGATGCAGCCACCAGGAGCACCTGGACCCCTGCCCCGCCACATGGTGTGGCCATCA
CTCAGCCCCTACCCCTGCCCTGCTCCTAAGGGTAGAAAATCCAGGGTCCCCCTGCCACCGACTGCCAGCCACTC
CAAGCCCCCTGGCAGCTGCCCTCCTGGAGCAGAAAGTGCCTTTATCTCAGCCATCCGCAGACTGCTGGCCAGAT
GCGGGGACAGGCTGGAATGAGGGAGGCGTCTTCATCTCCCTGCCATCCCCCTCTCAGGCCACCCCGCCCCACC
GGGCTGCAGGTGCTGCTGATGCGCTGGGATCTGATTGAGGATAAAAAGGAAGGAGAGATGACCCCTACCCCTCA
TCCCCAGTTTTGAAAAGGTCTAAGCAAGTGAGTCTGGTGGAGGAGCTGAGGGAGGGAGCCATGGAAGGTGCCAG
AAGGAAGGTTGGCGGGGGCACGTGTGGGCCGTGGCTTGGGCTGGTCAGAGTGGCGTGAGCTGCCGGCGCCTGCC
CTGCCCAAGTGACCAGGGAAGTGTGTGTGTGTCCATGTGTATGCGTGTCCGTCTGTCTGTCTAGTGTCTGGGTTT
GGCCCAAGACTGGGCTGTAGTTACATTAATGCCAGCCAGCCACCCCTGCCACTCACCCCTCCTGGCCCAGGCCT
TGCTGACTCTCTGAGCTGGGGAGGTGGGAGGCCAGGCGAGCCTGACTCTGTTGATCTACCCGTGCCTGGGCCCT
CCCCTCAGAGCCCCATGGTAACGAACCCCTAGAAAGGAGAGAACGGGCGTCAGGGGTGCACAGTCCACAGCTGAAG
AGCAAGGTTTCGTGGCAGCACGGCCCGGCCCTCACCTCTGTCCCCACGAGGGGACCCATGGGGGCTGTCTTTG
CAGGGCACAGATGACCAAAGTCCCTTCTGCTTCTGTACCTGTCTTGTCTCTGGGGAGAAAGAGGGGCTGAT
GAGACTCCACTCAGGTGCACACATCACCAGGTGCATCTGCAGGCACCGGGCTGGCTGCTTGCAGCCAGGAGAAGG
TCAGCGAGAAGGAGTGATGAGTGTGAGTGTGTGTGCATGGAAGTTGGGGCACTGGGCGTCTGACTCCCTCCCCA
CCCAAGAGAGGAAGGACCCCTCACACCCCCACTGGCGAGACAGTTTACTTTGCCGACTTGCCATGTTTTTGCCA

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FIGURE 15B

AAACCAAGATTTTGAAGGAAATGAGTGGCCAGCGCCAGGGCCCAGGCCATGTGGCCTGCCCAGCCTCAATGTCAC
TTGGCGGCGGGGTGGGGTGGGGGTGGGCAGCAGCATCCCAGCCTTGAGATGCTTCACTTTCCTTCTCTGTAACCA
GACTTTGAAAAATTGTTGTTTCATCAGGCTCTGTTCTCAATGGCCTTTTGCTACGTGCCTCCCGAGAAATTTG
TCTTTTGTATAAATGACAAAGTGTGAAAATGTATTTCTGAAATAAATGTTTCAAATGCAGAAACCCAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 16

MERDRISALKRSFEVEEVETPNSTPPRRVQTPLLRA TVASSTQKFQDLGVKNSEPSARHVDSLSQRSPKASLRRV
ELSGPKAAEPVSRRTLSIDISSKQVENAGAIGPSRFG LKRAEVLGHKTPEPAPRRT EITIVKPQESAHR RM EPP
ASKVPEVPTAPATDAAPKRVEIQMPKP AEAPTAPSPAQTLENS EPAPVSQ LQSRLEPKPQPPVAEATPRSQEATE
AAPSCVGDMA DTPRDAGLKQAPASRNEKAPVDFGYVGIDSILEQMRRKAMKQGFEFNIMVVGQSGLGKSTLINTL
FKSKISRKSVQPTSEERIPKTIEIKSITHDIEEKGV RMKLTVIDTPGF GDHINNENCWQPI MKFINDQYEKYLQE
EVNINRKKRIPDTRVHCCLYFIPATGHSLRPLDIEFMKRLSKVVNI VPVIAKADTLTLEERVHFKQRITADLLSN
GIDVYPQKEFDEDEDSEDLVNEKFREMIPFAVVGSDHEYQVNGKRILGRKTKWGTIEVENTTHCEFAYLRDLLIRT
HMQNIKDITSSIHFEAYRVKRLNEGSSAMANGVEEKEPEAPEM

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FIGURE 17

CCGCTTCCCCGTCTTGTACACCCCTAACTCCTGAGGCTCCTCCGAATCACGCGAGTGGAAGCGGAGAAGCTCAAG
TGGCCGCCATGTCAGAGGCTTATTTCCGAGTGGAGTCGGGTGCGCTGGGGCCTGAGGAGAACTTTCTTTCTTTGG
ACGACATCCTGATGTCCCACGAGAAGCTGCCGGTGCGCACGGAGACCGCCATGCCTCGCCTTGGCGCTTTCTTCC
TGGAGCGGAGCGCAGGCGCCGAGACTGACAACGCGGTCCCACAGGGTTCCAAGCTTGAACCTACCCTTGTGGCTGG
CAAAAGGACTTTTTGACAACAAGCGACGGATCCTTTCTGTGGAACCTCCCCAAGATCTACCAAGAGGGTTGGAGGA
CTGTGTTTCACTGTCAGATCCCAATGTGGTGGACCTCCACAAAATGGGGCCCCATTTCTACGGGTTTGGCTCCCAGC
TCCTGCATTTTGACAGTCCCCGAGAATGCAGACATTTCCAGTCTCTGCTGCAGACTTTTATCGGACGTTTTTCGCC
GCATCATGGACTCCTCACAGAATGCTTACAACGAAGACACTTCAGCCCTGGTAGCCAGGCTAGACGAGATGGAGA
GGGGCTTATTTCAAACAGGGCAGAAAGGACTGAATGACTTTCAGTGTGGGAGAAGGGGCAGGCTTCTCAGATCA
CAGCTTCCAACCTCGTTTCAAGATTACAAGAAGAGAAAATTCAGTGATGGAAGACTGAAAGCCGGAAGAACA
GAATGGCTCCTCACAGACGTATCCCTCCGTGTGTCTTGTATAGGAGCTGGTTGACCTTGTACAGAACCAGAATCC
TGTCCCATTTTATGAGCTTATTTCTGTGGCCATAGAGAATTATAGGGAAGTGGACATGCTGGAGGATGTGGGTGT
CCCTGGCTCTGTGAGTCTTCCAGGACCGTCCCACCTGCTGACCCACAGCCAGGGCCCTTTAACCCAAGAACCCA
TGGCCAAGGAGAAATCAAAGTCCTTCTAAATAAGAATCACTGCCATATAATATATCACAGTAGAGTTGCAACTG
AGATTCTTGTGTCTGGGAGTTTGGACAGCTTCAGATGTACAGTTTCACTAGCCACAAAGCACAGGTACAAACTG
GGTCATCGCTGTTTCAAAAATGCTCTCTTGATCTTATTTGCCTCATCTTCTCATGGTTGTACAGAGGATAGCA
CCCCACCATGCCAGCCTGACTTGGAGATATCTCTGCTGCCTGCCTGCAGGGAGTTACCCCACTTTTCAAAAACA
GTCGCCCAGATAAAGGAGGAAAAGGGAAGGCAGACGAATGGCATGGCTTTTACTAAAGAAAAGATGTTGGCCTC
ATACTCTATACTCAGGGCTTAATGAACTGGAATCTGCATAACTCAGCAGTCAACCCAGAAGGGAAATGGTTAAAC
TGAGCTTGTATTATGCCTCGGAGAGCCTAAGAGCACCCGCACACTTAATTCTACTCCCTGTCTAGAAAAGCTGTCA
GGGAGTCGTTTGAATTGCAATGTAGTTATTAAGGGCTGTTAACCAGCCTGCATTACATCTGGAAGTCAGGACTT
GGGTGCTGACTATGAAGGGCCCTGTTTTCAAAATCTAACATTGCAAGTGTAATGGGCAAGAAGCCTCCGTTGTG
CTTTTTTTTTCTCTTTCAGTAACCTTTTGCAACATTATTGCATAGAAGATCCCTGACCACTTTACTAGGAACCTGGT
TAAGCAAGCACTAATCTCTTTTCTGGAGATCAAGGATGCAACCTCAGGTTGAGAAAGAAACAGGGTTCCCTGGG
CCCATTAGACTGTTTGCAGGGCATCACTGCTTCCCCCTGCACCTCACAACTAGCAAAAATTTGTCTTTGTCTTTG
GAAATTATAGAGGGATTTGGGTATCCAGATTGTGCAGATGCAAACTTAGGCTGTCTTGATGCAAACTTAGAACCA
CAGAAATGCTTTTAAATGCCTGTTTTAAGATGGAATTGTTGTTTTTATAATTTGATTTTAGTGCTAAATAAATG
ATTGGCTTTGTACATGAATATGTTCTGTACAAGTGCTCTTTCAGTACTACAGATAATCAAAGCTATCAGAAT
TGTGTCTTTGATCATATTTGACGGTAATACACAAATAAATCCATGTTTTAGCAAAAAAAAAAAAAAAAAAAAAA
A

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FIGURE 18

MSEAYFRVESGALGPEENFLSLDDILMSHEKLPVRTETAMPRLGAFFLERSAGAETDNAVPOGSKLELPLWLAKG
LFDNKRILSVELPKIYQEGWRTVFSADPNVVDLHKMGPHFYGFSGQLLHFDSPENADISQSLLOTFIGRFRRIM
DSSQNAYNEDTSALVARLDEMERGLFQTGQKGLNDFQCWEKGQASQITASNLVQNYKKRKFTDMED

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FIGURE 19

GTTTACGTCTCGCTCCGGGGCGGAAAGTGGGTCAGGGCCGGGCTGGCGGAGCGCGCAGCGGGGGCTGCAGATTCT
TTCCACCATGGCCAGACGCCCCGGAACAGCAGGGCCTGGCACTTCGTCTTGAGTGCAGCCCGCCGAGACGCAGA
TGCCCGGGCCGTGGCTCTAGCGAGGCCTCCTTCTGTAGCAGCCTGCACTCGGCCCCACGGGGCAGGGACTGCCGC
TGCGGAGAGGAAGACGAGTGTGAGCGTGGGGCCAGCCCCCTGCTGGGACTGCACTGCGGGCGGGCCTGGGGGTGG
GCAGGGCAGAGCCCCATGGAGCTCTCAGGGCTGCCCCAGCCTGGGCCTCTCTTGAGATTTCGACTGGGTCTGGG
ATGACTTAAATAAGTCATCAGCCACCCTGCTGAGCTGTGACAACCGTAAGGTCAGCTTCCACATGGAGTACAGCT
GCGGCACAGCGGCCATCCGGGGCACCAAGGAGCTGGGGGAGGGCCAGCACTTCTGGGAGATCAAGATGACCTCTC
CCGTCTACGGCACACTCACCTTTTTCAAGAACAGGAAGTGTATAGGTGTGGCAGCCACCAAGCTGCAGAACAAGA
GATTCTACCCGATGGTGTGCTCCACGGCGGCCCGGAGCAGCATGAAGGTCACCCGCTCCTGTGCCAGCGCCACTT
CCCTCCAGTACCTGTGCTGCCACCGCCTGCGCCAGCTGCGGCCAGACTCGGGAGACACGCTGGAGGGTCTGCCGC
TGCCGCCGGGCCTCAAGCAGGTGCTACACAACAAGCTGGGCTGGGTCTTGAGCATGAGTTGCAGCCGCCGCAAGG
CTCCAGTGTCCGATCCCCAGGCAGCGACCTCCGCCCACCCCAGCAGTCGCGAGCCTCGGCCCTGCCAGAGGAAGC
GCTGCCGCCGGACCTGACTGACTTCCCAGTGGAACTGCCTTCTTGGGCTGGGGCAGCCCCCTTTCCTCTGTCCCTT
CTTTCTCTGTCCCTTCCTTCCAGCCACACTCCAGGGCGGAGTTGGATGAGGCCCGTCCGGAGGGAGCCATCTCTT
GCTCCCGAGGCTGGGACAGTCCTTCTGTGGGGCTCTAGGGCCCCCTCTGCTGCTGTGCTGGGTGGGGAAGCGGC
TGCCCTGAGCCCCAGGTCTTGTGGGAGGCTGCGAGGACGAGAGCCTGGCTGGAGCCCGCGTTGCTGTTCTAGAT
GGTGGGCATCGGGACGTCCGATGTGGACCTGGACAAATACCGCCACACGTTCTGCAGCCTGCTGGGCAGGGATGA
GGACAGCTGGGGCCTCTCCTACACGGGTGCGTGAGGCCAGGGTGGGGCGGGGCCGAGCCTGGAGCTCCCGGGCT
CACTGCGACCCTGGCTGCCCCCAGGCCTCCTCCACCACAAGGGCGACAAGACCAGCTTCTCGTCGCGGTTCCGGC
AGGGCTCCATCATTTGGCGTGCACCTGGACACCTGGCACGGCACACTCACCTTTTTCTAATTGCTCTGCATGCT
GTCAGCGGCTGCCCCGCCGTCATAGACTTAAAGGACTGCAATAAATGTAGAGTTGATGTCTAACACCC

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FIGURE 20

MEYSCGTAAIRGTELGEQHFWEIKMTSPVYGTLTFFKNRKCIGVAATKLQNKRFYPMVCSTAARSSMKVTRSC
ASATSLQYLCCHRLRQLRPDSGDTLEGLPLPPGLKQVLHNKLGWVLSMSCSRRKAPVSDPQAATSAHPSSREPRP
CQRKRCRRT

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FIGURE 21

AGAAATCAACTGCTTAGCCGGGTTGTTAGGAGGATCTGATGAGACTAGGATGTGAGTTGAAACTGCTGTGCCAGG
CACACCTGTGTGGGTCTCACTTGTGCCAGGCATACCTGCGTGGGTCTCACCTGTGTAGGTCTCACCTGTGCCAGG
TGTACCTGTGTGGGTCTTACCTGTGCAGGTCTCCTGATGCAGGTCTCACCTGTGCCGAGTGTACCTACCTGTGCG
GGTCTCACCTGTGTGCAGGCGTACGTGTAGGGGTCTCACCTGTGAACGTCTCACCTGTGCCAGGTGTATACCTGTG
TGGCTCTCACTTGTGTGGGTCTGGTATGTGACAAAGGCCTGGGAATTGGCAGCTGTCATCTGCCAGGAGCAGACC
CTGAGCCAAGTTCCCTGTGCCTTAGGCTCATTTCATGCCCTCAGCTCTGGGAGGCCAATCCCTTTACTGCCACAT
TTTATAAATGGAAGACTGAGGTTAAGCAGTGGGCCCAGGGCCATAGAACAGCTGAGCTGTGGAGCTGGACATCGA
CCTTGGGCAGGTGCTGCCAGGGGCCTGAGCCCAGGCCCTCCACTCCCGCATCCTCTGATGACCCATCCTGGGTGA
GTGGAGGCATCTGCCGCGCCAGTCAGGCCCAGTGGTGATGGCCCCCATGCCACAGGACAGAAGCTGCTGGACT
CACTGGCAGAGACCTGGGACTTCTTCTTCAGTGACGTGCTGCCCCATGCTGCAGGCCATCTTCTACCCGGTGCAGG
GCAAGGAGCCATCGGTGCGCCAGCTGGCCCTGCTGCACTTCCGGAATGCCATCACCTCAGTGTGAAGCTAGAGG
ATGCGTGGCCCCGGGCCATGCCGCGTGCCCCCTGCCATCGTGCAGATGCTGCTGGTGTGTCAGGGGGTACATG
AGTCCAGGGGCGTGACTGAGGACTACCTGCGCCTGGAGACGCTGGTCCAGAAGGTGGTGTGCCATACCTGGGCA
CCTACGGCTCCACTCCAGCGAGGGGCCCTTACCCATTCTGTCATCCTGGAAGAGCGCCTCTCCGCCGCTCCC
GCTCGGGGGACGTGCTGGCCAAGAACCCTGTGGTGCCTCCAAGAGCTACAACACGCCTCTGCTGAACCCCGTGC
AGGAGCACGAGGCGGAGGGCGCGGCCGGCGGTACCAGCATCCGCTGGCACTCTGTGTGCGAGATGACGTCCT
GCCCCGAGCTCAGGGCTTCTCCGACCCGCCCCGGCCAGGGCCCCACCGGGACCTTCAGGTCTCTCCCGGCGCCCC
ACTCAGGGCCCTGCCCCAGCAGACTGTACCCACGACCCAGCCCCCTGAGCAGGGCTTGATCCCACCCGCAGCT
CCCTGCCCCGCTCCAGCCCGGAGAACCTGGTGGACCAGATCCTGGAGTCCGTGGACTCGGATTCTGAAGGGATTT
TCATTGACTTTGGCCGGGGCCGGGGCTCTGGCATGTCCGACTTGGAGGGCTCTGGGGGCCGGCAGAGTGTGCTGT
GAGGCCTCACAGCTGGCCTTGAGTTTTTACTGACACGTCCCTGTGTGCGGGGTGTCCATGTGGCGTGTGTGTA
GTGAGACTTTTTTACTGCGTCCCGTCCCGCCAGCCCTGTGCGCCTCGTCACTGGCCTTGGTCACTTTGTATTTCT
GTCTTGGTTGGAAATACCATCAGCCTTCCTTGCTCGGCCAGGTCTGTTTCAGGCATCTGAGTCAGCGTTTACCC
AGGGGCCGGGCCAGAGACGGGGGCCGGCGCTCGCTCCACGCTCCTCCTGCCCCAGCCCTCTGGTGTCCACACC
TGCCACAGAGAAATGTAAACCCAGTGGGCTCTGCCCACGCGGGCCCCAAAGTGACCAGACTCCAGCACACCTGT
CTCCTCCTGCCTGGGGTGGCCATGGGGATGGAAGGGGTGGAATAAAACCTGTCAACCTGAAAAAAAAAAAAAA
AAAAAA

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FIGURE 22

MAPMPTGQKLLDSLAE TW DFF FSDVLPMLQAIFYPVQGKEPSVRQLALLHFRNAITLSVKLEDALARAHARVPPA
IVQMLLV LQGVHESRGVTEDYLRLETLVQKVVSPYLGTYGLHSSEGPFTHSCILEKRLLRRSRSGDVLAKNPVVR
SKSYNTPLLNPVQEHEAEGAAAGGTSIRWHSVSEMTSCPEPQGFSDPPGQGPTGTFRSSPAPHSGPCPSRLYPTT
QPPEQGLDPTRSSLPSSPENLVDQILESVDSDSEGIFIDFGRGRGSGMSDLEGSGGRQSVV

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FIGURE 23

GTTGCCGCTGCGCACCTGGCTCAGGTGAGCTGCCCCGCCCCGCCCCGGCGCGAGCCCCAGGTCCTGGCAGCAGCC
CCTGACCTGTCCAGGTGCCCTGTCCAGCTGACTGCAAGGACAGAGAGGAGTCCTGCCCAGCTCTTGGATCAGTCT
GCTGGCCGAGGAGCCCCGGTGGAGCCAGGGGTGACCCTGGAGCCCAGCCTGCCCCGAGGAGGCCCGGGCTCAGAGC
CATGCCAGGTGTCTGTGATAGGGCCCCCTGACTTCCTCTCCCCGTCTGAAGACCAGGTGCTGAGGCCTGCCTTGGG
CAGCTCAGTGGCTCTGAACTGCACGGCTTGGGTAGTCTCTGGGCCCCACTGCTCCCTGCCTTCAGTCCAGTGGCT
GAAAGACGGGCTTCCATTGGGAATTGGGGGCCACTACAGCCTCCACGAGTACTCCTGGGTCAAGGCCAACCTGTC
AGAGGTGCTTGTGTCCAGTGTCTGGGGGTCAACGTGACCAGCACTGAAGTCTATGGGGCCTTCACCTGCTCCAT
CCAGAACATCAGCTTCTCCTCCTTCACTCTTCAGAGAGCTGGCCCTACAAGCCACGTGGCTGCGGTGCTGGCCTC
CCTCCTGGTCTGCTGGCCCTGCTGCTGGCCGCCCTGCTCTATGTCAAGTGCCGTCTCAACGTGCTGCTCTGGTA
CCAGGACGCGTATGGGGAGGTGGAGATAAACGACGGGAAGCTCTACGACGCCTACGTCTCTACAGCGACTGCCC
CGAGGACCGCAAGTTCGTGAACTTCATCCTAAAGCCGCAGCTGGAGCGGCGTCGGGGCTACAAGCTCTTCTGGA
CGACCGCGACCTCCTGCCGCGCGCTGAGCCCTCCGCCGACCTCTTGGTGAACCTGAGCCGCTGCCGACGCCTCAT
CGTGGTGCTTTCGGACGCCTTCTGAGCCGGGCCTGGTGCAGCCACAGCTTCCGGGAGGGCCTGTGCCGGCTGCT
GGAGCTCACCCGCAGACCCATCTTCATCACCTTCGAGGGCCAGAGGCGCGACCCCGCGCACCCGGCGCTCCGCCT
GCTGCGCCAGCACCGCCACCTGGTGACCTTGCTGCTCTGGAGGCCCGGCTCCGTGACTCCTTCCTCCGATTTTTG
GAAAGAAGTGACGCTGGCGCTGCCGCGGAAGGTGCGGTACAGGCCGGTGGGAAGGAGACCCCCAGACGCAGCTGCA
GGACGACAAGGACCCCATGCTGATTCTTCGAGGGCCGAGTCCCTGAGGGCCGGGCCCTGGACTCAGAGGTGGACCC
GGACCTGAGGGCGACCTGGGTGTCCGGGGGCCTGTTTTTGGAGAGCCATCAGCTCCACCGCACACCAAGTGGGGT
CTCGCTGGGAGAGAGCCGGAGCAGCGAAGTGACGTCTCGGATCTCGGCTCGCGAAACTACAGTGCCCGCACAGA
CTTCTACTGCCTGGTGTCCAAGGATGATATG**TAG**CTCCACCCCCAGAGTGCAGGATCATAGGGACAGCGGGGGCC
AGGGCAGCGGCGTCGCTCCTCTGCTCAACAGGACCACAACCCCTGCCAGCAGCCCTGGGACCCTGCCAGCAGCCC
TGGGAAAAGGCTGTGGCCTCAGGGCGCCTCCAGTGCCAGAAAATAAAGTCCTTTTGGATTCTGAAAAAAAAAAAA
AAA

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FIGURE 24

MFGVCDRAPDFLSPSEDQVLRPALGSSVALNCTAWVVS GPHCSLP SVQWLKDGLPLGIGGHYSLHEYSWVKANLS
EVLVSSVLGVNVTSTEVYGAFTCSIQNISFSSFTLQ RAGPTSHVAAVLASLLVLLALLLAALLYVKCRNLNVLLWY
QDAYGEVEINDGKLYDAYVSYSDCPEDRK FVNFI LKPQLERRRGYKFLDDRDL LPRAEPSADLLVNLSRCRRLI
VVLSDAFLSRAWCSHSFREGLCRLLELTRRPIFITFEGQRRDPAHPALRLLRQHRHLVTLLWRPGSVTPSSDFW
KEVQLALPRKVRYRPVEGDPQTQLQDDKDPM LILRGRVPEGRALDSEVDPDPEGDLGVRGPVFGEPSAPPHTSGV
SLGESRSSEVDVSDLGSRNYSARTDFYCLVSKDDM

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FIGURE 25

GGCACGAGGGGAGCGCTTGTGCTGCTCGTACTCCTCCATTTATCCGCCATGAATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGCAGCCTCCCGGGGCCCTACGGCCGCCCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTC AAGGCGGGATTATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTGGAATGCCGCCAAGCGACAG
GCTGTACCAACCCAAACAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTCTTGCCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACCTTTTGATATTTCTATCCTGGAAATTCAG
AAGAGGTATTTGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCAGTTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACCTCTCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCCAAGCATTGGAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCACTGATCTA
ATCAGAAGGACTATCGCTCCATGCCAAAAAGCTATGCAAGATGCAGAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCCAAGGTTGAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTGAGGAGGTGTGTTGGCCGGCGATGTCACG
GATGTGCTGCTCCTTGATGTCACTCCCTGTCTCTGGGTATTGAACTCTAGGAGGTGTCTTTACCAAACCTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGATGATATT
GAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAGAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAGCTGAAAGAAGAGATTCCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTGAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAGGAGGAAAAACAGTAAATAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCCCTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCATTTTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAACTTAGCTATTTATATTA
GGTACAGCTATTAAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACTTTTCTAGCTACCTT
CTGCCCTGTGCTGTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAA

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FIGURE 26

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLENAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRITAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAYVDLGGGTFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQVRREAEEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVLVGGMTRMPKVQQTVQDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTPTTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSADKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGI IHD TETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKL FEMAYKKMASERE GSGSGTGEQKEDQK
EEKQ

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FIGURE 27

GGCACGAGGGGAGCGCTTGTGCTGCCTCGTACTCCTCCATTTATCCGCCATGGATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGAGCCTCCCGGGGCCCTACGGCCGCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTC AAGGCGGGATTATGCATCAGAAACAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCAACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTGGAATGCCGGCCAAGCGACAG
GCTGTCAACCAACCAACAAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTCTTGCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACCTTTGATATTTCTATCCTGGAATTCAG
AAAGGAGTATTTGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCACTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACCTCTCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCAAGCATTGTAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCACTGATCTA
ATCAGAAGGACTATCGTCTCATGCCAAAAGCTATGCAAGATGCAGAAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCCAAGGTTGAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTGAGGGAGGTGTGTTGGCCGGCGATGTCAG
GATGTGCTGCTCCTTGATGTCACTCCCCTGTCTCTGGGTATTGAAACTCTAGGAGGTGTCTTTACCAAACCTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGATGATATT
GAAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAAGCTGAAAGAGAGATTTCCAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTGCAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAAGGAGGAAAAACAGTAAATAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCTTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCAATTTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAACTTAGCTATTTATATTA
GGTACAGCTATTAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACCTTTCTAGCTACCTT
CTGCCCTGTGTCTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAA

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FIGURE 28

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLNAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRTAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAYVDLGGGTFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQRVREAAEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVIILVGGMTRMPKVQQTVDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTIPTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSADKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGIIHDTETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKLFE MAYKKMASEREGSGSSGTGEQKEDQK
EEKQ

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FIGURE 29

GCCGTGTCGCCACCATGGCTCCGCACCGCCCCGCGCCCGCGCTGCTTTGCGCGCTGTCCCTGGCGCTGTGCGCGC
TGTCGCTGCCCGTCCGCGCGGCCACTGCGTCGCGGGGGCGTCCCAGGCGGGGGCGCCCCAGGGGCGGGTGCCCCG
AGGCGCGGCCAACAGCATGGTGGTGGAAACACCCCGAGTTCCTCAAGGCAGGGAAGGAGCCTGGCCTGCAGATCT
GGCGTGTGGAGAAGTTTCGATCTGGTGCCCGTGCCACCAACCTTTATGGAGACTTCTTCACGGGCGACGCCTACG
TCATCCTGAAGACAGTGCAGCTGAGGAACGGAAATCTGCAGTATGACCTCCACTACTGGCTGGGCAATGAGTGCA
GCCAGGATGAGAGCGGGGCGGCCGCCATCTTTACCGTGACGCTGGATGACTACCTGAACGGCCGGGCGCTGCAGC
ACCGTGAGGTCCAGGGCTTCGAGTCGGCCACCTTCCTAGGCTACTTCAAGTCTGGCCTGAAGTACAAGAAAGGAG
GTGTGGCATCAGGATTCAAGCACGTGGTACCCAACGAGGTGGTGGTGACAGAGACTCTTCCAGGTCAAAGGGCGGC
GTGTGGTCCGTGCCACCGAGGTACCTGTGTCTGGGAGAGCTTCAACAATGGCGACTGCTTCATCCTGGACCTGG
GCAACAACATCCACAGTGGTGTGGTTCCAACAGCAATCGGTATGAAAGACTGAAGGCCACACAGGTGTCCAAGG
GCATCCGGGACAACGAGCGGAGTGGCCGGGCGCGAGTGACGTGTCTGAGGAGGGCACTGAGCCCGAGGCGATGC
TCCAGGTGCTGGGCCCCAAGCCGGCTCTGCCTGCAGGTACCGAGGACACCGCCAAGGAGGATGCGGCCAACCGCA
AGCTGGCCAAGCTCTACAAGGTCTCCAATGGTGCAGGGACCATGTCCGTCTCCCTCGTGGCTGATGAGAACCCCT
TCGCCCAGGGGGCCCTGAAGTCAGAGGACTGCTTCATCCTGGACCACGGCAAAGATGGGAAAATCTTTGTCTGGA
AAGGCAAGCAGGCAAACACGGAGGAGAGGAAGGCTGCCCTCAAAACAGCCTCTGACTTCATCACCAGATGGACT
ACCCCAAGCAGACTCAGGTCTCGGTCTTCTGAGGGCGGTGAGACCCCACTGTTCAAGCAGTTCTTCAAGAACT
GGCGGGACCCAGACCAGACAGATGGCCTGGGCTTGTCTACCTTTCCAGCCATATCGCCAACGTGGAGCGGGTGC
CCTTCGACGCGCCACCTGCACACCTCCACTGCCATGGCCGCCAGCACGGCATGGATGACGATGGCACAGGCC
AGAAACAGATCTGGAGAATCGAAGGTTCCAACAAGGTGCCCGTGGACCCTGCCACATATGGACAGTTCTATGGAG
GCGACAGCTACATCATTCTGTACAACCTACCGCCATGGTGGCCGCCAGGGGAGATAATCTATAACTGGCAGGGTG
CCCAGTCTACCCAGGATGAGGTGCTGCATCTGCCATCCTGACTGCTCAGCTGGATGAGGAGCTGGGAGGTACCC
CTGTCCAGAGCCGTGTGGTCCAAGGCAAGGAGCCCCGCCACCTCATGAGCCTGTTTGGTGGGAAGCCCATGATCA
TCTACAAGGGCGGCACCTCCCGCGAGGGCGGGCAGACAGCCCTGCCAGCACCCGCCTCTTCCAGGTCCGCGCCA
ACAGCGCTGGAGCCACCCGGGCTGTTGAGGTATTGCCTAAGGCTGGTGCCTGAAGTCCAACGATGCCTTTGTTC
TGAAAACCCCTCAGCCGCCTACCTGTGGGTGGGTACAGGAGCCAGCGAGGCAGAGAAGACGGGGGCCAGGAGC
TGCTCAGGGTGCTGCGGGCCCCAACCTGTGCAGGTGGCAGAAGGCAGCGAGCCAGATGGCTTCTGGGAGGCCCTGG
GCGGGAAGGCTGCCTACCGCACATCCCCACGGCTGAAGGACAAGAAGATGGATGCCCATCCTCCTCGCCTCTTTG
CCTGCTCCAACAAGATTGGACGTTTTGTGATCGAAGAGGTTCTGGTGAGCTCATGCAGGAAGACCTGGCAACGG
ATGACGTCATGCTTCTGGACACCTGGGACCAGGTCTTTGTCTGGGTTGGAAAGGATTCTCAAGAAGAAGAAAAGA
CAGAAGCCTTGACTTCTGCTAAGCGGTACATCGAGACGGACCCAGCCAATCGGGATCGGCGGACGCCCATCACCG
TGGTGAAGCAAGGCTTTGAGCCTCCCTCCTTTGTGGGCTGGTTCCCTTGGCTGGGATGATGATTACTGGTCTGTGG
ACCCCTTGGACAGGGCCATGGCTGAGCTGGCTGCCTGAGGAGGGGCGAGGGCCACCCATGTCACCGGTGAGTGCC
TTTTGAACTGTCTTCCCTCAAAGAGGCCTTAGAGCGAGCAGAGCAGCTCTGCTATGAGTGTGTGTGTGTGT
GTGTTGTTCTTTTTTTTTTTTTTACAGTATCCAAAAATAGCCCTGCAAAAATTCAGAGTCCTTGCAAAATTGTC
TAAATGTCAGTGTGTTGGGAAATTAAATCCAATAAAAACATTTTGAAGTGTG

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FIGURE 30

MAPHRPAPALLCALSLALCALSLPVRAATASRGASQAGAPQGRVPEARPNMVEHPEFLKAGKEPGLQIWRVEK
FDLVPVPTNLYGDFFTGDAYVILKTVQLRNGNLQYDLHYWLGNECSQDESGAAAIFTVQLDDYLNGRAVQHREVQ
GFESATFLGYFKSGLKYKKGGVASGFKHVVPNEVVQRLFQVKGRRVVRATEVPVSWESFNNGDCFILDLGNNIH
QWCGSNSNRYERLKATQVSKGIRDNERSGRARVHVSEEGTEPEAMLQVLGPKPALPAGTEDTAKEDAANRKLAKL
YKVSNGAGTMSVSLVADENPFAQGALKSEDCFILDHGKDGKIFVWKGKQANTEERKAALKTASDFITKMDYPKQT
QVSVLPEGGETPLFKQFFKNWRDPDQTDGLGLSYLSSHIANVERVPFDAATLHTSTAMAAQHGMDDDG TGQKQIW
RIEGSNKVPVDPATYGFYGGDSYIILYNRYRHGGRQGQIIYNWQGAQSTQDEVAASAILTAQLDEELGGTPVQSR
VVQGKEPAHLMSLFGGKPMIIYKGGTSREGGQTAPASTRLFQVRANSAGATRAVEVLPKAGALNSNDAFVLKTPS
AAYLWVGTGASEAEKTGAQELLRLVLAQPVQVAEGSEPDGFWEALGGKAAYRTSPRLKDKKMDAHPRLFACSNK
IGRFVIEEVPGELMQEDLATDDVMLLD TDWQVFVWVGKDSQEEEEKTEALTSAKRYIETDPANRDRRTPTITVVKQG
FEPPSFVGWFLGWDDDYWSVDPLDRAMAELAA

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FIGURE 31

CGCCCCCTGCTCTCGCGCCGGCGTGGGCTGCGTCTCCGGCGTTTGAATTGCGCTTCCGCCATCTTTCCAGCCTCAG
TCGGACGGGCGCGGAGGCGCTTCTGGAAGGAACGCCGCGATGGCTGCGCAGGGAGAGCCCCAGGTCCAGTTCAAA
CTTGATTTGGTTGGTGATGGTGGTACTGGAAAAACGACCTTCGTGAAACGTCATTTGACTGGTGAATTTGAGAAG
AAGTATGTAGCCACCTTGGGTGTTGAGGTTTCATCCCTAGTGTTCCACACCAACAGAGGACCTATTAAGTTCAAT
GTATGGGACACAGCCGGCCAGGAGAAAATTCGGTGGACTGAGAGATGGCTATTATATCCAAGCCCAGTGTGCCATC
ATAATGTTTGATGTAACATCGAGAGTTACTTACAAGAATGTGCCTAACTGGCATAGAGATCTGGTACGAGTGTGT
GAAAACATCCCCATTGTGTTGTGTGGCAACAAAGTGGATATTAAGGACAGGAAAGTGAAGGCGAAATCCATTGTC
TTCCACCGAAAGAAGAATCTTCAGTACTACGACATTTCTGCCAAAAGTAACTACAACCTTTGAAAAGCCCTTCCTC
TGGCTTGCTAGGAAGCTCATTGGAGACCCTAACTTGAATTTGTTGCCATGCCTGCTCTCGCCCCACCAGAAGTT
GTCATGGACCCAGCTTTGGCAGCACAGTATGAGCACGACTTAGAGGTTGCTCAGACAACCTGCTCTCCCGGATGAG
GATGATGACCTGTGAGAATGAAGCTGGAGCCCAGCGTCAGAAAGTCTAGTTTTATAGGCAGCTGTCCTGTGATGTC
ACCGGTGCAGCGTGTGTGCCACCTCATTATTATCTAGCTAAGCGGAACATGTGCTTTATCTGTGGGATGCTGAAG
GAGATGAGTGGGCTTCGGAGTGAATGTGGCAGTTTAAAAAATAACTTCATTGTTTGGACCTGCATATTTAGCTGT
TTGGACGCAGTTGATTCCCTTGAGTTTCATATATAAGACTGCTGCAGTCACATCACAATATTCAGTGGTGAAATCT
TGTTTGTTACTGTCATTCCCATTCTTTCTTTAGAAATCAGAATAAAGTTGTATTTCAAATATCTAAGCAAGTGA
ACTCATCCCTTGTTTATAAATAGCATTTGGAAACCACTAAAGTAGGGAAGTTTTATGCCATGTTAATATTTGAAT
TGCCTTGCTTTTTATCACTTAATTTGAAATCTATTGGGTAAATTTCTCCCTATGTTTATTTTTGTACATTTGAGCC
ATGTCACACAAACTGATGATGACAGGTCAGCAGTATTCTATTTGGTTAGAAGGGTTACATGGTGTAAATATTAGT
GCAGTTAAGCTAAAGCAGTGTTTGCTCCACCTTCATATTGGCTAGGTAGGGTCACCTAGGGAAGCACTTGCTCAA
AATCTGTGACCTGTCAGAATAAAAAATGTGGTTTGTACATATCAAATAGATATTTTAAGGGTAATATTTTCTTTTA
TGGCAAAAGTAATCATGTTTTAATGTAGAACCTCAAACAGGATGGAACATCAGTGGATGGCAGGAGGTTGGGAAT
TCTTGCTGTTAAAAATAATTACAAATTTTGCACTTTTGTGTTGAATGTTAGATGCTTAGTGGAAGTTGATACGC
AAGCCG

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FIGURE 32

MAAQGEPOVQFKLVLVGDGGTGKTTFVKRHLTGEFEKKYVATLGVEVHPLVFHTNRGPIKFNVWDTAGQEKFGGL
RDGYIQAQCAIIMFDVTSRVTYKNVPNWHRDLVRVCENIPIVLCGNKVDIKDRKVKAKSIVFHRKKNLQYYDIS
AKSNYNFEKPFLLWLARKLIGDPNLEFVAMPALAPPEVMDPALAAQYEHDLVAQTALPDEDDDL

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FIGURE 33

GGCACGAGGCGCCCGCCTGCTACGAGTAGAACGCTGTCCGCAGCTTGCGCATTTCGCAGCCGCTGCCGCTCGCC
GCTGCTCCTTCGTAAGGCCACTTCCGCACACCGACACCAACATGAACGGACAGCTCAACGGCTTCCACGAGGCGT
TCATCGAGGAGGGCACATTCTTTTACCTCAGAGTCGGTTCGGGGAAGGCCACCCAGATAAGATTTGTGACCAAA
TCAGTGATGCTGTCTTGATGCCCACCTTCAGCAGGATCCTGATGCCAAAGTAGCTTGTGAAACTGTTGCTAAAA
CTGGAATGATCCTTCTTGCTGGGGAAATTACATCCAGAGCTGCTGTTGACTACCAGAAAGTGGTTCGTGAAGCTG
TTAAACACATTGGATATGATGATTCTTCCAAAGGTTTTGACTACAAGACTTGTAACGTGCTGGTAGCCTTGGAGC
AACAGTCACCAGATATTGCTCAAGGTGTTTCATCTTGACAGAAATGAAGAAGACATTGGTGTGAGAGACCAGGGCT
TAATGTTTGGCTATGCCACTGATGAAACTGAGGAGTGTATGCCTTTAACCATTGTCTTGGCACACAAGCTAAATG
CCAAACTGGCAGAACTACGCCGTAATGGCACTTTGCCTTGGTTACGCCCTGATTCTAAAACTCAAGTTACTGTGC
AGTATATGCAGGATCGAGGTGCTGTGCTTCCCATCAGAGTCCACACAATTGTTATATCTGTTTCAGCATGATGAAG
AGGTTTGTCTTGATGAAATGAGGGATGCCCTAAAGGAGAAAGTCATCAAAGCAGTTGTGCCTGCGAAATACCTTG
ATGAGGATACAATCTACCACCTACAGCCAAGTGGCAGATTTGTTATTGGTGGGCCTCAGGGTGATGCTGGTTTGA
CTGGACGCAAAATCATTGTGGACACTTATGGCGGTTGGGGTGCTCATGGAGGAGGTGCCTTTTCAGGAAAGGATT
ATACCAAGGTCGACCGTTCAGCTGCTTATGCTGCTCGTTGGGTGGCAAAATCCCTTGTTAAAGGAGGTCTGTGCC
GGAGGGTTCTTGTTTCAGGTCTCTTATGCTATTGGAGTTTCTCATCCATTATCTATCTCCATTTTCCATTATGGTA
CCTCTCAGAAGAGTGAGAGAGAGCTATTAGAGATTGTGAAGAAGAATTCGATCTCCGCCCTGGGGTCATTGTCA
GGGATCTGGATCTGAAGAAGCCAATTTATCAGAGGACTGCAGCCTATGGCCACTTTGGTAGGGACAGCTTCCCAT
GGGAAGTGCCCAAAAGCTTAAATATTCGAAAGTGTTAGCCTTTTTTCCCCAGACTTGTTGGCGTAGGCTACAGAG
AAGCCTTCAAGCTCTGAGGGAAGGGCCCTCCTTCCTAAATTTTCTGTCTCTTTTCAGCTCTTGACCAGTTGCA
GTCACCTCTAGTCAATGACATGAATTTTAGCTTTTGTGGGGGACTGTAAGTTGGGCTTGCTATTCTGTCCCTAGGT
GTTTTGTTACCATTATAATGAATTTAGTGAGCATAGGTGATCCATGTAAGTGCCTAGAAACAACACTGTAGTAA
ATAATGCTTTGAAATTGAACCTTTGTGCCCTATCACCCAACGCTCCAAAGTCATAATTGCATTGACTTTCCCCAC
CAGATGCTGAAAATGTCCTTGTGATGTGCACGTAAAGTACTTGTAGTTCCACTTATAGCCTCTGTCTGGCAATGC
CACAGCCCTGTCAGCATGAATTTGTAATGTCCTTGAGCTCTATTATGAATGTGAAGCCTTCCCTTATCTCCCTG
TAACTTGATCCATTTCTAATTATGTAGCTCTTTGTCAGGGAGTGTTCCCTATCCAATCAATCTTGCAATGTAACGC
AAGTTCCCAGTTGGAGCTCCAGCCTGACATCAAAAAAGGCAGTTACCATTAAACCATCTCCCTGGTGCTTATGCT
CTTAATTGCCACCTCTAACAGCACCAATCAAAATCTCTCCACTTTCAGCTGTCTTTTGGAGGACGTACGTAATA
AGGTTTTAATTTAGTAAACCAATCCTATGCATGGTTTCAGCACTAGCCAAACCTCACCAACTCCTAGTTCTAGAA
AAACAGGCACCTTGGCAGCCTTGTGATGTCATACAGAGAAGTCACAGGGCAGTACCTGAGGGTCTGTAGGTTGCAC
ACTTTGGTACCAGATAACTTTTTTTTTTCTTTATAAGAAAGCCTGAGTACTCCACACTGCACAATAACTCCTCCC
AGGGTTTTAATTTGTTTTATTTTCAAACACAGGTCCAATGAGCTTCTGAACAGCTGGTGTAGCTACAGAGAAA
CCAGCTTCCTTCAGAGAGCAGTGCTTTTGGCGGGGAGGAGGAAATCCCTTCATACTTGAACGTTTTCTAATTGCT
TATTTATTGTATTCTGGGGTATGGCGTAAGTACAGAGAAGCCATCACCTCAGATGGCAGCTTTTAAAAGATTTT
TTTTTTCTCTCAACACCATGATTCTTTAACAACATGTTCCAGCATCCCAGGTAGGCCAAGGTGTCCTACAG
AAAAACCTTGGGTTAGACCTACAGGGGTCTGGCTGGTGTAAACAGAAGGGAGGGCAGAGCTGGTGGGCTGGCC
ATGGAGAAAGCTGACTTGGCTGGTGTGGTACAGAGAAGCCAGCTTGTTTACATGCTTATTCCATGACTGCTTGCC
CTAAGCAGAAAGTGCCTTTTCAGGATCTATTTTTGGAGGTTTATTACGTATGTCTGGTTCTCAATTCCAACAGTTT
AATGAAGATCTAAATAAAATGCTAGGTTCTACCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 34

MNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQDPDAKVACETVAKTGMILLAGEITSRA
AVDYQKVVREAVKHIGYDDSSKGFYKTCNVLVALEQQSPDIAQGVHLDRNEEDIGAGDQGLMFGYATDETEECM
PLTIVLAHKLNALAE LRRNGTLPWLRPDSKTQVTVQYMQDRGAVLP IRVHTIVISVQHDEEVCLDEM RDALKEK
VIKAVVPAKYLD EDTIYHLQPSGRFVIGGPQGDAGLTGRKIIVD TYGGWGAHGGGAFSGKDYTKVDRSAAYAARW
VAKSLVKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVIVRDLDLKKPIYQRTA
AYGHFGRDSFPWEVPKKLKY

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FIGURE 35

GGCACGAGGCGCCCGCTGCTACGAGTAGAACGCTGTCCGCAGCTTGCGCATTTCGCAGCCGCTGCCGCCCTCGCC
GCTGCTCCTTCGTAAGGCCACTTCCGCACACCGACACCAAC**ATGA**ACGGACAGCTCAACGGCTTCCACGAGGCGT
TCATCGAGGAGGGCACATTCTTTTACCTCAGAGTCGGTCGGGGAAGGCCACCCAGATAAGATTGTGACCAAA
TCAGTGATGCTGTCTTGATGCCCACCTTCAGCAGGATCCTGATGCCAAAGTAGCTTGTGAAACTGTTGCTAAAA
CTGGAATGATCCTTCTTGCTGGGGAAATTACATCCAGAGCTGCTGTTGACTACCAGAAAGTGGTTCGTGAAGCTG
TTAAACACATTGGATATGATGATTCTTCCAAAGGTTTTGACTACAAGACTTGTAACGTGCTGGTAGCCTTGGAGC
AACAGTCACCAGATATTGCTCAAGGTGTTCACTTGACAGAAATGAAGAAGACATTGGTGTGAGACCAGGGCT
TAATGTTTGGCTATGCCACTGATGAAACTGAGGAGTGTATGCCTTTAACCATTGTCTTGGCACACAAGCTAAATG
CCAACTGGCAGAACTACGCCGTAATGGCACCTTGCCTTGGTTACGCCCTGATTCTAAAACTCAAGTTACTGTGC
AGTATATGCAGGATCGAGGTGCTGTGCTTCCCATCAGAGTCCACACAATTGTTATATCTGTTTCAGCATGATGAAG
AGGTTTGTCTTGATGAAATGAGGGATGCCCTAAAGGAGAAAGTCATCAAAGCAGTTGTGCCTGCGAAATACCTTG
ATGAGGATACAATCTACCACCTACAGCCAAGTGGCAGATTTGTTATTGGTGGGCCTCAGGGTGATGCTGGTTTGA
CTGGACGCAAAATCATTGTGGACACTTATGGCGGTTGGGGTGCTCATGGAGGAGGTGCCTTTTCAGGAAAGGATT
ATACCAAGGTGACCGTTTACGCTGCTTATGCTGCTCGTTGGGTGGCAAAATCCCTTGTTAAAGGAGGTCTGTGCC
GGAGGGTTCTTGTTTCAGGTCTCTTATGCTATTGGAGTTTCTCATCCATTATCTATCTCCATTTTCCATTATGGTA
CCTCTCAGAAGAGTGAGAGAGAGCTATTAGAGATTGTGAAGAAGAATTCGATCTCCGCCCTGGGGTCATTGTCA
GGGATCTGGATCTGAAGAAGCCAATTTATCAGAGGACTGCAGCCTATGGCCACTTTGGTAGGGACAGCTTCCCAT
GGGAAGTGCCCAAAAAGCTTAAATAT**TGAA**AGTGTTAGCCTTTTTTCCCCAGACTTGTTGGCGTAGGCTACAGAG
AAGCCTTCAAGCTCTGAGGGAAAGGGCCCTCCTTCTAAATTTTCTGTCTCTTTTCAGCTCCTGACCAGTTGCA
GTCACCTCTAGTCAATGACATGAATTTTAGCTTTTGTGGGGGACTGTAAGTTGGGCTTGCTATTCTGTCCCTAGGT
GTTTTGTTTACCATTATAATGAATTTAGTGAGCATAGGTGATCCATGTAAGTGCCTAGAAACAACACTGTAGTAA
ATAATGCTTTGAAATTGAACCTTTGTGCCCTATCACCCAACGCTCCAAAGTCATAATTGCATTGACTTTCCCCAC
CAGATGCTGAAATGTCCTTGTGATGTGCACGTAAAGTACTTGTAGTTCCACTTATAGCCTCTGTCTGGCAATGC
CACAGCCCTGTTCAGCATGAATTTGTAATGTCTTGAGCTCTATTATGAATGTGAAGCCTTCCCCTTATCCTCCCTG
TAACTTGATCCATTTCTAATTATGTAGCTCTTTGTTCAGGGAGTGTTCCCTATCCAATCAATCTTGCATGTAACGC
AAGTTCACGATTGGAGCTCCAGCCTGACATCAAAAAAGGCAGTTACCATTAAACCATCTCCCTGGTGCTTATGCT
CTTAATTGCCACCTCTAACAGCACCAAAATCAAAATCTCTCCACTTTCAGCTGTCTTTTGGAGGACGTACGTAATA
AGGTTTTAATTTAGTAAACCAATCCTATGCATGGTTTTAGCACTAGCCAAACCTCACCAACTCCTAGTTCTAGAA
AAACAGGCACCTTGGCAGCCTTGTGATGTGCATACAGAGAAGTCACAGGGCAGTACCTGAGGGTCTGTAGGTTGCAC
ACTTTGGTACCAGATAACTTTTTTTTTTCTTTATAAGAAAGCCTGAGTACTCCACACTGCACAATAACTCCTCCC
AGGGTTTTAACTTTGTTTTATTTTCAAAACCAGGTCCAATGAGCTTTCTGAACAGCTGGTGTAGCTACAGAGAAA
CCAGCTTCCTTCAGAGAGCAGTGCTTTTGGCGGGGAGGAGGAAATCCCTTCATACTTGAACGTTTTCTAATTGCT
TATTTATTGTATTCTGGGGTATGGCGTAAGTACAGAGAAGCCATCACCTCAGATGGCAGCTTTTAAAGATTTTT
TTTTTTTCTCTCAACACCATGATTCTTTTAAACAATGTTTCCAGCATTCCCAGGTAGGCCAAGGTGTCTACAG
AAAAACCTTGGGTTAGACCTACAGGGGGTCTGGCTGGTGTAAACAGAAGGGAGGGCAGAGCTGGTGGCGCTGGCC
ATGGAGAAAGCTGACTTGGCTGGTGTGGTACAGAGAAGCCAGCTTGTTTACATGCTTATTCCATGACTGCTTGCC
CTAAGCAGAAAGTGCCTTTCAGGATCTATTTTGGAGGTTTATTACGTATGTCTGGTTCTCAATTCCAACAGTTT
AATGAAGATCTAAATAAAATGCTAGGTTCTACCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 36

MNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQDPDAKVACETVAKTGMILLAGEITSRA
AVDYQKVVREAVKHIGYDDSSKGFYKTCNVLVALEQQSPDIAQGVHLDRNEEDIGAGDQGLMFGYATDETEECM
PLTIVLAHKLNAKLAE LRRNGTLPWLRPDSKTQVTVQYMQDRGAVLP IRVHTIVISVQHDEEVCLDEM RDALKEK
VIKAVVPAKYLDED TIYHLQPSGRFVIGGPQGDAGLTGRKIIVD TYGGWGAHGGGAFSGKDYTKVDRSAAYAARW
VAKSLVKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVIVRDLDLKKPIYQRTA
AYGHFGRDSFPWEVPKKLKY

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FIGURE 37

GTCAGTCCCTCCTGTAGCCGCCGCCGCCGCCGCCGCCGCCCTCTGCCAGCAGCTCCGGCGCCACCTCGGGCCG
GCGTCTCCGGCGGGCGGGAGCCAGGCGCTGACGGGCGCGGGCGGGGGCGGCCGAGCGCTCCTGCGGCTGCGACTCA
GGTCCGGCGTCTGCGCTTCCCATGGGGCTGGCCTGCGGCGCCTGGGCGCTCTGAGATTGTCAGTGTGTTCCA
AGGGCACACGCAGAGGGATTTGGAATTCCTGGAGAGTTGCCTTTGTGAGAAGCTGGAAATATTTCTTTCAATTCC
ATCTCTTAGTTTTCCATAGGAACATCAAGAAATCATGAACAACCTTTGGTAATGAAGAGTTTGACTGCCACTTCCT
CGATGAAGGTTTTACTGCCAAGGACATTCTGGACCAGAAAATTAATGAAGTTTCTTCTTCTGATGATAAGGATGC
CTTCTATGTGGCAGACCTGGGAGACATTCTAAAGAAACATCTGAGGTGGTTAAAAGCTCTCCCTCGTGTCACCCC
CTTTATGCAGTCAAATGTAATGATAGCAAAGCCATCGTGAAGACCCTTGCTGCTACCGGGACAGGATTTGACTG
TGCTAGCAAGACTGAAATACAGTTGGTGCAGAGTCTGGGGGTGCCTCCAGAGAGGATTATCTATGCAAATCCTTG
TAAACAAGTATCTCAAATTAAGTATGCTGCTAATAATGGAGTCCAGATGATGACTTTTGATAGTGAAGTTGAGTT
GATGAAAGTTGCCAGAGCACATCCCAAAGCAAAGTTGGTTTTGCGGATTGCCACTGATGATTCCAAAGCAGTCTG
TCGTCTCAGTGTGAAATTCGGTGCCACGCTCAGAACCAGCAGGCTCCTTTTGGAACGGGCGAAAGAGCTAAATAT
CGATGTTGTTGGTGTGAGCTTCCATGTAGGAAGCGGCTGTACCGATCCTGAGACCTTCGTGCAGGCAATCTCTGA
TGCCCGCTGTGTTTTTGACATGGGGGCTGAGGTTGGTTTTAGCATGTATCTGCTTGATATTGGCGGTGGCTTTCC
TGGATCTGAGGATGTGAAACTTAAATTTGAAGAGATCACCGGCGTAATCAACCCAGCGTTGGACAAATACTTTCC
GTCAGACTCTGGAGTGAGAATCATAGCTGAGCCCGGCAGATACTATGTTGCATCAGCTTTCACGCTTGCAAGTAA
TATCATTGCCAAGAAAATTGTATTAAAGGAACAGACGGGCTCTGATGACGAAGATGAGTCGAGTGAGCAGACCTT
TATGTATTATGTGAATGATGGCGTCTATGGATCATTTAATTGCATACTCTATGACCACGCACATGTAAAGCCCCT
TCTGCAAAAAGAGACCTAAACCAGATGAGAAGTATTATTCATCCAGCATATGGGGACCAACATGTGATGGCCTCGA
TCGGATTGTTGAGCGCTGTGACCTGCCTGAAATGCATGTGGGTGATTGGATGCTCTTTGAAAACATGGGCGCTTA
CACTGTTGCTGCTGCCCTCTACGTTCAATGGCTTCCAGAGGCCGACGATCTACTATGTGATGTCAGGGCCTGCGTG
GCAACTCATGCAGCAATTCAGAACCCCGACTTCCCACCCGAAGTAGAGGAACAGGATGCCAGCACCTTGCCTGT
GTCTTGTGCCTGGGAGAGTGGGATGAAACGCCACAGAGCAGCCTGTGCTTCGGCTAGTATTAATGTGTAGATAGC
ACTCTGGTAGCTGTTAACTGCAAGTTTAGCTTGAATTAAGGGATTTGGGGGGACCATGTAACCTAATTACTGCTA
GTTTTGAAATGTCTTTGTAAGAGTAGGGTCGCCATGATGCAGCCATATGGAAGACTAGGATATGGGTCACACTTA
TCTGTGTTCCATGGAACCTATTTGAATATTTGTTTTATATGGATTTTTATTCACTCTTCAGACACGCTACTCAA
GAGTGCCCCCTCAGCTGCTGAACAAGCATTGTAGCTTGTACAATGGCAGAATGGGCCAAAAGCTTAGTGTTGTGA
CCTGTTTTTAAATAAAGTATCTTGAAATAATTAGGC

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FIGURE 38

MNCFGNEEFDCFLDEGFTAKDILDQKINEVSSSDDKDAFYVADLGDILKKHLRWLKA
LPRVTPFYAVKCND
SKAIVKTLAATGTGFD
CASKTEIQLVQSLGVPPERIIYANPCKQVSQIKYAANNGVQMMTFDSEVELMKVARAHPKAK
LVLRIATDDSKAVCRLSVKFGATLRTSRLLLERAKELNIDVVGVSFHVSGCTDPETFVQAISDARCVFDMGAEV
GFSMYLLDIGGGFPGSE
DVKLFEEITGVINPALDKYFPSDSGVRIIAEPGRYYVASAFTLAVNIIAKKIVLKEQ
TGSDDEDESSEQTFMY
YVNDGVYGSFNCILYDHAHVKPLLQKRPKPDEKYYSSSIWGPTCDGLDRIVERCDLPEM
HVGDWMLFENMGAYTVAAASTFNGFQRPTIYYMSGPAWQLMQQFQNPDPFPEVEEQDASTLPVSCAWESGMKRH
RAACASASINV

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FIGURE 39

CACGCTTGCCGCCGCCCCGCAGAAATGCTTCGGTTACCCACAGTCTTTGCCAGATGAGACCGGTGTCCAGGGTA
CTGGCTCCTCATCTCACTCGGGCTTATGCCAAAGATGTAAAATTTGGTGCAGATGCCCCGAGCCTTAATGCTTCAA
GGTGTAGACCTTTTAGCCGATGCTGTGGCCGTTACAATGGGGCCAAAGGAAGAACAGTGATTATTGAGCAGGGT
TGGGGAAGTCCCAAAGTAACAAAAGATGGTGTGACTGTTGCAAAGTCAATTGACTTAAAAGATAAATACAAGAAC
ATTGGAGCTAAACTTGTTCAGATGTTGCCAATAACACAAATGAAGAAGCTGGGGATGGCACTACCACTGCTACT
GTACTGGCACGCTCTATAGCCAAGGAAGGCTTCGAGAAGATTAGCAAAGGTGCTAATCCAGTGGAATCAGGAGA
GGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACCTAAAAAGCAGTCTAAACCTGTGACCACCCCTGAAGAA
ATTGCACAGGTTGCTACGATTTCTGCAAACGGAGACAAAGAAATTGGCAATATCATCTCTGATGCAATGAAAAA
GTTGGAAGAAAGGGTGTCTACAGTAAAGGATGGAAAAACACTGAATGATGAATTAGAAATTATTGAAGGCATG
AAGTTTGATCGAGGCTATATTTCTCCATACTTTATTAATACATCAAAAGGTCAGAAATGTGAATTCAGGATGCC
TATGTTCTGTTGAGTGAAAAAGAAAATTTCTAGTATCCAGTCCATTGTACCTGCTCTTGAAATTGCCAATGCTCAC
CGTAAGCCTTTGGTCATAATCGCTGAAGATGTTGATGGAGAAGCTCTAAGTACACTCGTCTTGAAATAGGCTAAAG
GTTGGTCTTCAGGTTGTGGCAGTCAAGGCTCCAGGGTTTGGTGACAATAGAAAGAACCAGCTTAAAGATATGGCT
ATTGCTACTGGTGGTGCAGTGTTTGGAGAAGAGGGATTGACCCTGAATCTTGAAGACGTTTACGCTCATGACTTA
GGAAAAGTTGGAGAGGTCATTGTGACCAAAGACGATGCCATGCTCTTAAAAGGAAAAGGTGACAAGGCTCAAATT
GAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACCTAGTGAATATGAAAAGGAAAAACTGAATGAA
CGGCTTGCAAACCTTTCAGATGGAGTGGCTGTGCTGAAGGTTGGTGGGACAAGTGATGTTGAAGTGAATGAAAAG
AAAGACAGAGTTACAGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGCATTGTTTTGGGAGGGGGTTGT
GCCCTCCTTCGATGCATTCCAGCCTTGGACTCATTGACTCCAGCTAATGAAGATCAAAAAATTGGTATAGAAATT
ATTAAAAGAACTCAAAATTCAGCAATGACCATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATAGTTGAG
AAAATTATGCAAAGTTCCTCAGAAGTTGGTTATGATGCTATGGCTGGAGATTTTGTGAATATGGTGGAAAAAGGA
ATCATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCTGCTGGTGTGGCCTCTCTGTAACTACAGCA
GAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCAATGGGTGGAATGGGAGGTGGT
ATGGGAGGTGGCATGTTCTAACTCCTAGACTAGTGCTTTACCTTTATTAATGAACTGTGACAGGAAGCCCAAGGC
AGTGTTCTCACCATAAATTCAGAGAAGTCAGTTGGAGAAAATGAAGAAAAAGGCTGGCTGAAAATCACTATAA
CCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTACTGCTGTCATTGTCCATGCCTACAGATAATTT
ATTTTGTATTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTACAAGAGCCATGTACCAGTGTACTGCT
TTCAACTTAAATCACTGAGGCATTTTACTACTATTCTGTTAAAATCAGGATTTTAGTGCTTGCCACCACCAGAT
GAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAGAGAAGTATCCAATTATGTGACA
ACCTTTGTGTAATAAAAAATTTGTTTAA

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FIGURE 40

MLRLPTVFRQMRPVSRVLAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIEQGWGSPKVTK
DGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIKEGFEEKISKGANPVEIRRGVMLAVDA
VIAELKKQSKPVTTPPEEIAQVATISANGDKEIGNIISDAMKKVGRKGVITVKDGKTLNDELEIIEGMKFDRGYIS
PYFINTSKGQKCEFQDAYVLLSEKKISSIQSIVPALEIANAHRKPLVIAEDVDGEALSTLVNLRLKVGLQVVAV
KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTKDDAMLLKGKGDKAQIEKRIQEII
EQLDVTTSEYEKEKLNRLAKLSGVAVLKVGGTSDVEVNEKKDRVTDALNATRAAVEEGIVLGGGCALLRCIPA
LDSLTPANEDQKIGIEIIKRTLKIPAMTIAKNAGVEGSLIVEKIMQSSSEVGYDAMAGDFVNMVEKGIIDPTKV
RTALLDAAGVASLLTTAEVVVTEIPKEEKDPGMGAMGGMGGMGGMF

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FIGURE 41

CACGCTTGCCGCCGCCCGCAGAAATGCTTCGGTTACCCACAGTCTTTGCCAGATGAGACCGGTGTCCAGGGTA
CTGGCTCCTCATCTCACTCGGGCTTATGCCAAAGATGTAAAATTTGGTGCAGATGCCCGAGCCTTAATGCTTCAA
GGTGTAGACCTTTTAGCCGATGCTGTGGCCGTTACAATGGGGCCAAAGGGAAGAACAGTGATTATTGAGCAGGGT
TGGGGAAGTCCCAAAGTAACAAAAGATGGTGTGACTGTTGCAAAGTCAATTGACTTAAAAGATAAAATACAAGAAC
ATTGGAGCTAAACTTGTTCAGATGTTGCCAATAACACAAATGAAGAAGCTGGGGATGGCACTACCACTGCTACT
GTACTGGCAGCTCTATAGCCAAGGAAGGCTTCGAGAAGATTAGCAAAGGTGCTAATCCAGTGGAATCAGGAGA
GGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACCTTAAAAGCAGTCTAAACCTGTGACCACCCCTGAAGAA
ATTGCACAGGTTGCTACGATTTCTGCAAACGGAGACAAAGAAATTGGCAATATCATCTCTGATGCAATGAAAAAA
GTTGGAAGAAAGGGTGTTCATCACAGTAAAGGATGGAAAAACACTGAATGATGAATTAGAAATTATTGAAGGCATG
AAGTTTGATCGAGGCTATATTTCTCCATACTTTATTAATACATCAAAGGTCAGAAATGTGAATTCCAGGATGCC
TATGTTCTGTTGAGTGAAAAGAAAATTTCTAGTATCCAGTCCATTGTACCTGCTCTTGAAATTGCCAATGCTCAC
CGTAAGCCTTTGGTCATAATCGCTGAAGATGTTGATGGAGAAGCTCTAAGTACACTCGTCTTGAATAGGCTAAAG
GTTGGTCTTCAGGTTGTGGCAGTCAAGGCTCCAGGGTTTGGTGACAATAGAAAGAACCAGCTTAAAGATATGGCT
ATTGCTACTGGTGGTGCAGTGTGGAGAAGAGGGATTGACCCTGAATCTTGAAGACGTTTACGCTCATGACTTA
GGAAAAGTTGGAGAGGTCATTGTGACCAAAGACGATGCCATGCTCTTAAAAGGAAAAGGTGACAAGGCTCAAATT
GAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACCTAGTGAATATGAAAAGGAAAAACTGAATGAA
CGGCTTGCAAACTTTTCAGATGGAGTGGCTGTGCTGAAGGTTGGTGGGACAAGTGATGTTGAAGTGAATGAAAAG
AAAGACAGAGTTACAGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGCATTGTTTTGGGAGGGGGTTGT
GCCCTCCTTCGATGCATTCCAGCCTTGGACTCATTGACTCCAGCTAATGAAGATCAAAAAATTGGTATAGAAATT
ATTAAAAGAACACTCAAATTCAGCAATGACCATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATAGTTGAG
AAAATTATGCAAAGTTCCTCAGAAGTTGGTTATGATGCTATGGCTGGAGATTTTGTGAATATGGTGGAAAAAGGA
ATCATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCTGCTGGTGTGGCCTCTCTGTAACTACAGCA
GAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCAATGGGTGGAATGGGAGGTGGT
ATGGGAGGTGGCATGTTCTAACTCCTAGACTAGTGCTTTACCTTTATTAATGAAGTGTGACAGGAAGCCCAAGGC
AGTGTTCCTACCAATAACTTCAGAGAAGTCAGTTGGAGAAAATGAAGAAAAGGCTGGCTGAAAATCACTATAA
CCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTACTGCTGTCATTGTCCATGCCTACAGATAATTT
ATTTTGTATTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTACAAGAGCCATGTACCAGTGTACTGCT
TTCAACTTAAATCACTGAGGCATTTTTACTACTATTCTGTTAAAATCAGGATTTTAGTGCTTGCCACCACCAGAT
GAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAGAGAAGTATCCAATTATGTGACA
ACCTTTGTGTAATAAAAAATTTGTTTAA

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FIGURE 42

MLRLPTVFRQMRPVSRLAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIEQGWGSPKVTK
DGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIKEGFEEKISKGANPVEIRRGVMLAVDA
VIAELKKQSKPVTTPEEIAQVATISANGDKEIGNIISDAMKKVGRKGVITVKDGKTLNDELEIEGMMKFDRGYIS
PYFINTSKGQKCEFQDAYVLLSEKKISSIQSIVPALEIANAHRKPLVIAEDVDGEALSTLVNLRLKVGLQVVAV
KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTKDDAMLLKGKGDKAQIEKRIQEII
EQLDVTTSEYEKEKLNERLAKLSDGVAVLKVGGTSDVEVNEKKDRVTDALNATRAAVEEGIVLGGGCALLRCIPA
LDSLTPANEDQKIGIEIIKRTLKIPAMTIAKNAGVEGSLIVEKIMQSSEVGYDAMAGDFVNMVEKGIIDPTKVV
RTALLDAAGVASLLTTAEVVVTEIPKEEKDPGMGAMGGMGGGMGGGMF

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FIGURE 43A

AGCGCCCGCCGCTCCGGGGCCGGCTGGTGCGCGAGACGCCGCCGAGAGTTGTGAAGGGCGCGGGTGGGGGGCGC
TGCCGGCCTCGTGGGTACGTTTCGTGCCGCTCTGTCCCAGAGCTGGGGCCGCAGGAGCGGAGGCAAGAGGGGCAC
TATGGCCAGACAAAGTTAGGAGGCAGAGGCCGAGGAGCGAGTCTGTTGGGCCTTGGTGGCTGTGCTCTTGCCAGA
CCTGTTGGCACTGAGTGATACACTGGCAGTGATGTCTGTGGACCTGGGCAGTGAGTCCATGAAGGTGGCCATTGT
CAAACCTGGAGTGCCCATGGAAATTGTCTTGAATAAGGAATCTCGGAGGAAAACACCGGTGATCGTGACCCTGAA
AGAAAATGAAAGATTCTTTGGAGACAGTGCAGCAAGCATGGCGATTAAGAATCCAAAGGCTACGCTACGTTACTT
CCAGCACCTCCTGGGGAAGCAGGCAGATAACCCCCATGTAGTCTTTTACCAGGCCCGCTTCCCGGAGCACGAGCT
GACTTTCGACCCACAGAGGCAGACTGTGCACCTTCAGATCAGCTCGCAGCTGCAGTTCTCACCTGAGGAAGTGTT
GGGCATGGTTCTCAATTATTCTCGTTCTCTAGCTGAAGATTTTGAGAGCAGCCCATCAAGGATGCAGTGATCAC
CGTGCCAGTCTTCTTCAACCAGGCCGAGCGCCGAGCTGTGCTGCAGGCTGCTCGTATGGCTGGCCTCAAAGTGCT
GCAGTCTCATCAATGACAACACCGCCACTGCCCTCAGCTATGGTGTCTTCCGCCGAAAGATATTAACACCACTGC
CCAGAATATCATGTTCTATGACATGGGCTCAGGCAGCACCGTATGCACCATTGTGACCTACCAGATGGTGAAGAC
TAAGGAAGCTGGGATGCAGCCACAGCTGCAGATCCGGGGAGTAGGATTTGACCGTACCCTGGGGGGCCTGGAGAT
GGAGTCCGGCTTCGAGAACGCCTGGCTGGGCTTTTCAATGAGCAGCGCAAGGGTCAGAGAGCAAAGGATGTGCG
GGAGAACCCGCTGCCATGGCCAAGCTGCTGCGTGAGGCTAATCGGCTCAAACCGTCTCAGTGCCAACGCTGA
CCACATGGCACAGATTGAAGGCCTGATGGATGATGTGGACTTCAAGGCAAAAGTGACTCGTGTGGAATTTGAGGA
GTTGTGTGCAGACTTGTGTTGAGCGGTGCTGGGCTGTACAGCAGGCCCTCCAGAGTGCCGAAATGAGTCTGGA
TGAGATTGAGCAGGTGATCCTGGTGGGTGGGGCCACTCGGGTCCCCAGAGTTCAGGAGGTGCTGCTGAAGGCCGT
GGGCAAGGAGGAGCTGGGGAAGAACATCAATGCAGATGAAGCAGCCGCCATGGGGGCAGTGTAACAGGCAGCTGC
GCTCAGCAAAGCCTTTAAAGTGAAGCCATTTGTGCTCCGAGATGCAGTGGTCTACCCCATCCTGGTGGAGTTTAC
GAGGGAGGTGGAGGAGGAGCCTGGGATTACAGCCTGAAGCACAATAAACGGGTACTCTTCTCTCGGATGGGGCC
CTACCCTCAACGCAAAGTCATCACCTTTAACCGCTACAGCCATGATTTCAACTTCCACATCAACTACGGCGACCT
GGGCTTCTGGGGCCTGAAGATCTTCGGGTATTTGGCTCCAGAATCTGACCACAGTGAAGCTAAAAGGGGTGGG
TGACAGCTTCAAGAAGTATCCTGACTACGAGTCCAAGGGCATCAAGGCTCACTTCAACCTGGATGAGAGTGGCGT
GCTCAGTCTAGACAGGGTGGAGTCTGTATTTGAGACACTGGTAGAGGACAGCGCAGAAGAGGAATCTACTCTCAC
CAAACCTGGCAAACACCATTTCAGCCTGTTTGGAGGCGGTACCACACCAGATGCCAAGGAGAATGGTACTGATAC
TGTCAGGAGGAAGAGGAGAGCCCTGCAGAGGGGAGCAAGGACGAGCCTGGGGAGCAGGTGGAGCTCAAGGAGGA
AGCTGAGGCCCCAGTGAGGATGGCTCTCAGCCCCCACCCTGAACTAAGGGAGATGCAACCCCTGAGGGAGA
AAAGGCCACAGAAAAAGAAAATGGGGACAAGTCTGAGGCCAGAAACCAAGTGAGAAGGCAGAGGCAGGGCCTGA
GGGCGTGCCTCCAGCCCCAGAGGGAGAGAAGAAGCAGAACCCGCCAGGAAGCGGCGAATGGTAGAGGAGATCGG
GGTGGAGCTGGTTGTCTTGACCTGCCTGACTTGCCAGAGGATAAGCTGGCTCAGTCGGTGCAGAACTTCAGGA
CTTGACACTCCGAGACCTGGAGAAGCAGGAACGGGAAAAAGCTGCCAACAGCTTGGAGCGTTTCAATTTGAGAC
CCAGGACAAGCTGTACCAGCCCGAGTACCAGGAAGTGTCCACAGAGGAGCAGCGTGAGGAGATCTCTGGGAAGCT
CAGCGCCGCATCCACCTGGCTGGAGGATGAGGGTGTGGAGCCACCACAGTGATGTTGAAGGAGAAGCTGGCTGA
GCTGAGGAAGCTGTGCCAAGGGCTGTTTTTTCGGGTAGAGGAGCGCAAGAAGTGGCCCCGAACGGCTGTCTGCCCT
CGATAATCTCCTCAACCATTCAGCATGTTCTCAAGGGGGCCCGGCTCATCCCAGAGATGGACCAGATCTTCAC
TGAGGTGGAGATGACAACGTTAGAGAAAGTCATCAATGAGACCTGGGCCTGGAAGAATGCAACTCTGGCCGAGCA
GGCTAAGCTGCCCCGCCACAGAGAAGCCTGTGTTGCTCTCAAAGACATTGAAGCTAAGATGATGGCCCTGGACCG
AGAGGTGCAGTATCTGCTCAATAAGGCCAAGTTTACCAAGCCCCGGCCCCGGCCTAAGGACAAGAATGGGACCCG
GGCAGAGCCACCCCTCAATGCCAGTGCCAGTGACCAGGGGGAGAAGGTCATCCCTCCAGCAGGCCAGACTGAAGA
TGCAGAGCCCATTTTCAAGACCTGAGAAAGTAGAGACTGGATCCGAGCCAGGAGACACTGAGCCTTTGGAGTTAGG
AGGTCTCTGGAGCAGAACCTGAACAGAAAGAACAATCGACAGGACAGAAGCGGCCCTTTGAAGAACGACGAACATA
ACCCCCACCTCTGTTTTTCCCCATTCTCCACCCCTTCCCCACCCTTCTATTTATTTAACATCGAGGGTTG
GGGGAGGGGTTGGTCTGCCCTCGGCTGGAGTTCCTTTCTACCCCTGTGATTTGGAGGTGTGGAGAAGGGGAAG
GGAGGGACAGCTCACTGGTTTCTTCTGCAGTACCTCTGTGGTTAAAAATGGAACTGTTCTCTCTCCCGAGCCCCA
CTCCCTGTTCCCTACCCATATAGGCCCTAAATTTGGGAAAAATCACTATTAATTTCTGAATCCTTTGCCTGTGGG
TAGGAAGAGAATGGCTGCCAGTGCTGATGGGTCCCGGTGATGGGAAGGGTATCAGGTTGCTGGGGAGTTCCAC
TCTTCTCTGGTGATTGTTTCTTCCCTCCCTTCTCTCCACCATGCGATGAGCATCCTTTTCAGGCCAGTGCTGCG

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FIGURE 43B

AGAGCCTCAGTTACCAGGTTTGGTTTCTGAGTGCCTATCTGTGCTCTTTCCCTCCCTCTGCGGGCTTCTCTTGCTC
TGAGCCTCCCTTCCCCATTCCCATGCAGCTCCTTTCCCCCTGGGTTTCCCTTGGCTTCCTGCAGCAAATTGGGCAG
TTCTCTGCCCCCTTGCCTAAAAGCCTGTACCTCTGGATTGGCGGAAGTAAATCTGGAAGGATTCTCACTCGTATTT
CCCACCCCTAGTGGCCAGAGGAGGGAGGGGCACAGTGAAGAAGGGAGCCCACCACCTCTCCGAAGAGGAAAGCCA
CGTAGAGTGGTTGGCATGGGGTGCCAGCATCGTGCAAGCTCTGTGCATAATCTGCATCTTCCCAGCAGCCTGGTAC
CCCAGGTTCCCTGTAACTCCCTGCCTCCTCCTCTCTTCTGCTGTTCTGCTCCTCCCAGACAGAGCCTTTCCCTCAC
CCCCTGACCCCTGGGCTGACCAAATGTGCTTTCTACTGTGAGTCCCTATCCCAAGATCCTGGGGAAAGGAGAG
ACCATGGTGTGAATGTAGAGATGCCACCTCCCTCTCTCTGAGGCAGGCCTGTGGATGAAGGAGGAGGGTCAGGGC
TGGCCTTCCTCTGTGCATCACTCTGCTAGGTTGGGGGCCCCGACCCACCATACTACGCCTAGGGAGCCCCGTCC
TCCAGTATTCCGTCTGTAGCAGGAGCTAGGGCTGCTGCCTCAGCTCCAAGACAAGAATGAACCTGGCTGTGTCAG
TCATTTTGTCTTTTCCTTTTTTTTTTTTTTTGGCCACATTGGCAGAGATGGGACCTAAGGGTCCACCCCTCACCCCA
CCCCACCTCTTCTGTATGTTTGAATTCTTTCAGTAGCTGTTGATGCTGGTTGGACAGGTTTGAGTCAAATTGTA
CTTGCTCCATTGTTAATTGAGAACTGTTTCAATAAAATATTCTTTTCTAC

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FIGURE 44

MADKVRQRPRRRVCWALVAVLLADLLALSDTLAVMSVDLGSESMKVAIVKPGVPMIIVLNKESRRKTPVIVTLK
ENERFFGDSAASMAIKNPKATLRYFQHLLGKQADNPHVALYQARFPEHELTDFDPQRQTVHFQISSQLQFSPEEVL
GMVLNYSRSLAEDFAEQPIKDAVITVPVFFNQAERRAVLQAARMAGLKVLQLINDNTATALSYGVFRRKDINTTA
QNIMFYDMGSGSTVCTIVTYQMVKTKKEAGMQPQLQIRGVGFDRTLGGLEMEELRLRERLAGLFNEQRKGQRAKDVR
ENPRAMAKLLREANRLKTVLSANADHMAQIEGLMDDVDFKAKVTRVEFEELCADLFEFVPGPVQQALQSAEMSLD
EIEQVILVGGATRVPRVQEVLLKAVGKEELGKNINADEAAAMGAVYQAAALSKAFKVKPFVVRDAVVYPILVEFT
REVEEEPGIHSCLKHNKRVLF SRMGYPYQQRKVITFNRYSHDFNFHINYGDLGFLGPEDLRVFGSQNLTTVKLKGVG
DSFKKYPDYESKGIKAHFNLDSEGLSLDRVESVFETLVEDSAEEESTLTKLGNTISSLFGGGTTTPDAKENGTD
VQEEEESPAEGSKDEPGEQVELKEEAEPVEDGSQPPPEPKGDATPEGEKATEKENGDKSEAQKPEKAEAGPE
GVAPAPEGEKKQKPARKRRMVEEIGVELVVLDPDLDPEDKLAQSVQKLQDLTLRDLEKQEREKAANSLEAFIFET
QDKLYQPEYQEVSTEEQREEISGKLSAASTWLEDEGVGATTVMLKEKLAELRKLCQGLFFRVEERKKWPERLSAL
DNLLNHSSMFLKGARLIPEMDQIFTEVEMTTLEKVINETWAWKNATLAEQAKLPATEKPVLLSKDIEAKMMALDR
EVQYLLNKAKFTKPRPRPKDKNGTRAEPPLNASASDQGEKVIPPAGQTEDAEPISSEPEKVETGSEPGDTEPLELG
GPGEPEQEKEQSTGQKRPLKNDL

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FIGURE 45

ATACACGTGCCATGTGCAGCATGAGGGGCTACCCGAGCCCGTCACCCTGAGATGGAAGCCGGCTTCCCAGCCCAC
CATCCCCATCGTGGGCATCATTGCTGGCCTGGTTCTCCTTGGATCTGTGGTCTCTGGAGCTGTGGTTGCTGCTGT
GATATGGAGGAAGAAGAGCTCAGGTGAAAAGGAGGGAGCTACTCTAAGGCTGAGTGGAGCGACAGTGCCCAGGG
GTCTGAGTCTCACAGCTTGTAAGCCTGAGACAGCTGCCTTGTTGTGCGACTGAGATGCACAGCTGCCTTGTTGTGC
GACTGAGATGCAGGATTTCCCTCACGCCTCCCCTATGTGTCTTAGGGGACTCTGGCTTCTCTTTTTGCAAGGGCCT
CTGAATCTGTCTGTGTCCCTGTTAGCACAAATGTGAGGAGGTAGAGAAAACAGTCCACCTCTGTGTCTACCATGACC
CCCTTCCCTCACACTGACCTGTGTTCCCTTCCCTGTTCTCTTTTCTATTAAAAATAAGAACCTGGGCAGAGTGCGGC
AGCTCATGCCTGTAATCCCAGCACTTAGGGAGGCCGAGGAGGGCAGATCACGAGGTCAGGAGATCGAAACCATCC
TGGCTAACACGGTGAAACCCCGTCTCTACTAAAAAATACAAAAAATTAGCTGGGCGCAGAGGCACGGGCCTGTAG
TCCCAGCTACTCAGGAGGCGGAGGCAGGAGAATGGCGTCAACCCGGGAGGCGGAGGTTGCAGTGAGCCAGGATTG
TGCGACTGCACTCCAGCCTGGGTGACAGGGTGAAACGCCATCTCAAAAAATAAAAAATTAAAAAATAAAAAAAGAA
CCTGGATCTCAATTTAATTTTTTCATATTCTTGCAATGAAATGGACTTGAGGAAGCTAAGATCATAGCTAGAAATA
CAGATAATTCCACAGCACATCTCTAGCAAATTTAGCCTATTCTATTCTCTAGCCTATTCTTTACCACCTGTAAT
CTTGACCATATACCTTGAGGTTGAATATTGTTTTCATACTGCTGTGGTTTGAATGTTCCCTCCAACACTCATGTT
GAGACTTAATCCCTAATGTGGCAATACTGAAAGGTGGGGCCTTTGAGATGTGATTGGATCGTAAGGCTGTGCCTT
CATTCTATGGGTTAATGGATTAATGGGTTATCACAGGAATGGGACTGGTGGCTTTATAAGAAGAGGAAAAGAGAAC
TGAGCTAGCATGCCCCAACCACAGAGAGCCTCCACTAGAGTGATGCTAAGTGGAATGTGAGGTGCAGCTGCCAC
AGAGGGCCCCCACCAGGGAATGTCTAGTGTCTAGTGGATCCAGGCCACAGGAGAGAGTGCCTTGTTGGAGCGCTG
GGAGCAGGACCTGACCACCACCAGGACCCAGAACTGTGGAGTCAGTGGCAGCATGCAGCGCCCCCTTGGGAAAG
CTTTAGGCACCAGCCTGCAACCCATTGAGCAGCCACGTAGGCTCGACCCAGCAAAGCCACAGGCACGGGGCTAC
CTGAGGCCTTGGGGGCCAATCCCTGCTCCAGTGTGTCCGTGAGGCAGCACACGAAGTCAAAGAGATTATCTCTT
CCCACAGATACCTTTTCTCTCCCATGACCCTTTAACAGCATCTGCTTCATTCCCCTCACCTTCCCAGGCTGATCT
GAGGTAACTTTGAAGTAAAATAAAAGCTGTGTTTGAGCATC

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FIGURE 46

CCTCTCGGAGCTGGAAATGCAGCTATTGAGATCTTCGAATGCTGCGGAGCTGGAGGCGGAGGCAGCTGGGGAGGT
CCGAGCGATGTGACCAGGCCGCCATCGCTCGTCTCTTCCTCTCTCCTGCCGCCCTCCTGTGTCGAAAATAACTTTT
TTAGTCTAAAGAAAGAAAGACAAAAGTAGTCGTCCGCCCCCTCACGCCCTCTCTTCCTCTCAGCCTTCCGCCCGGT
GAGGAAGCCCGGGGTGGCTGCTCCGCCGTGGGGCCGCGCCGCCGAGCCCCAGCGCCCCGGGGCCGCCCGCCGACG
CCGCCCCCATGCATCCCTTCTACACCCGGGCCGCCACCATGATAGGCGAGATCGCCGCCGCCGTGTCTTTCATCT
CCAAGTTTCTCCGCACCAAGGGGCTGACGAGCGAGCGACAGCTGCAGACCTTCAGCCAGAGCCTGCAGGAGCTGC
TGGCAGAACATTATAAACATCACTGGTTCCAGAAAAGCCATGCAAGGGATCGGGTTACCGTTGTATTTCGCATCA
ACCATAAAATGGATCCTCTGATTGGACAGGCAGCACAGCGGATTGGACTGAGCAGTCAGGAGCTGTTTCAGGCTTC
TCCCAAGTGAACCTCACACTCTGGGTTGACCCCTATGAAGTGTCTACAGAATTGGAGAGGATGGCTCCATCTGTG
TGCTGTATGAAGCCTCACCAGCAGGAGGTAGCACTCAAAACAGCACCAACGTGCAAATGGTAGACAGCCGAATCA
GCTGTAAGGAGGAACCTTCTCTTGGGCAGAACGAGCCCTTCCAAAACTACAATATGATGACTGTATCAGGTTAAG
ATATAGTCTGTGGATGGATCATCTGATGATGATCCATAAATTTGATTTTTGCTTTGGGTGGGCTCCTCTTGGGGA
TGGATTATGGAATTTAAACCATGTCACAGCTGTGAAGATCTGGCACAAGATAGAATGGTAAAAAAAAAAAAAAAAAT
TTTAAGTGACAGTGCCATAGTTTGGACAGTACCTTTCAATGATTAATTTTAATAGCCTGTGAGTCCAAGTAAATG
ATCACTTTATTTGCTAGGGAGGGGAAGTCCTAGGGTGGTTTTAGTTTTCTCCAGACATACCTAAATTTTTACATCA
ATCCTTTTAAAGAAAATCTGTATTTCAAAGAATCTTTCTCTGCAGTAAATCTCGCAGGGGAATTTGCACTATTAC
ACTTGAAAGTTGTTATTGTTAACCTTTTCGGCAGCTTTTAATAGGAAAGTTAAACGTTTTAAACATGGTAGTACT
GGAAATTTTACAAGACTTTTACCTAGCACTTAAATATGTATAAATGTACATAAAGACAACTAGTAAGCATGACC
TGGGGAAATGGTCAGACCTTGATTGTGTTTTTGGCCTTGAAAGTAGCAAGTGACCAGAATCTGCCATGGCAACA
GGCTTTAAAAAAGACCCTTAAAAAGACACTGTCTCAACTGTGGTGTTAGCACCAGCCAGCTCTCTGTACATTTGC
TAGCTTGTAGTTTTCTAAGACTGAGTAACTTCTTATTTTTAGAAAGTGGAGGTCTGGTTTGTAACTTTCTTTGT
ACTTAATTGGGTAAAAGTCTTTTCCACAAACCACCATCTATTTTGTGAACTTTGTTAGTCATCTTTTATTTGGTA
AATTATGAAGTGGTGAAATTTGTACAGTTCATGTATATTGATTGTGGCAAAGTTGTACAGATTTCTATATTTG
GATGAGAAATTTTTCTTCTCTCTATAATAAATCGTTTCTTATCTTGGCATTTTTAACC

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FIGURE 47

MHPFYTRAATMIGEIAAAVSFISKFLRTKGLTSE RQLQTFSQSLQELLAEHYKHHWFPEKPCKGSGYRCIRINHK
MDPLIGQAAQRIGLSSQELFRLLPSELTLWVDPYEVSYRIGEDGSICVLYEASPAGGSTQNSTNVQMVDSRISCK
EELLGRTSPSKNYNMMTVSG

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FIGURE 48

GGCACGAGGACCGACCGCATTGCGGCTTGGTTTTCTCACCCAGTGCATGTGGCAGGAGCGGTGAGATCACTGCCT
CACGGCGATCCTGGACTGACGGTCACGACTGCCTACCCTCTAACCCTGTTCTGAGCTGCCCCCTGCCCCACACACC
CCAAACCTGTGTGCAGGATCCGCCTCCATGGAGCTACAGCCTCCTGAAGCCTCGATCGCCGTCGTGTCGATTCCG
CGCCAGTTGCCTGGCTCACATTTCGGAGGCTGGTGTCCAGGGTCTCAGCGCGGGGGACGACTCAGAGTTGGGGTCT
CACTGTGTTGCCCAGACTGGTCTCGAACTCTTGGCCTCAGGTGATCCTCTTCCCTCAGCTTCCCAGAATGCCGAG
ATGATAGAGACGGGGTCTGACTGTGTTACCCAGGCTGGTCTTCAACTCTTGGCCTCAAGTGATCCTCCTGCCTTA
GCTTCCAAGAATGCTGAGGTTACAGGCACCAATGAGCCAGGACACCGAGGTGGATATGAAGGAGGTGGAGCTGAAT
GAGTTAGAGCCCGAGAAGCAGCCGATGAACGCGGCGTCTGGGGCGGCCATGTCCCTGGCGGGAGCCGAGAAGAAT
GGTCTGGTGAAGATCAAGGTGGCGGAAGACGAGGCGGAGGCGGCAGCCGCGGCTAAGTTCACGGGCCTGTCCAAG
GAGGAGCTGCTGAAGGTGGCAGGCAGCCCCGGCTGGGTACGCACCCGCTGGGCACTGCTGCTGCTCTTCTGGCTC
GGCTGGCTCGGCATGCTTGCTGGTGCCGTGGTCATAATCGTGCAGAGCGCCGCTTGTGCGGAGCTACCGGCGCAG
AA3TGGTGGCACACGGGCGCCCTCTACCGCATCGGCGACCTTCAGGCCCTTCCAGGGCCACGGCGCGGGCAACCTG
GCGGGTCTGAAGGGGCGTCTCGATTACCTGAGCTCTCTGAAGGTGAAGGGCCTTGTGCTGGGTCCAATTCAACAAG
AACCAGAAGGATGATGTCGCTCAGACTGACTTGCTGCAGATCGACCCCAATTTTGGCTCCAAGGAAGATTTTGAC
AGTCTCTTGCAATCGGCTAAAAAAGAGCATCCGTGTATTCTGGACCTTACTCCCAACTACCGGGGTGAGAAC
TCGTGGTTCTCCACTCAGGTTGACACTGTGGCCACCAAGGTGAAGGATGCTCTGGAGTTTGGCTGCAAGCTGGC
GTGGATGGGTTCCAGGTTCCGGGACATAGAGAATCTGAAGGATGCATCCTCATTCTTGGCTGAGTGGCAAAATATC
ACCAAGGGCTTCAGTGAAGACAGGCTCTTGATTGCGGGGACTAACTCCTCCGACCTTCAGCAGATCCTGAGCCTA
CTCGAATCCAACAAAGACTTGCTGTTGACTAGCTCATACTGTCTGATTCTGGTTCTACTGGGGAGCATAACAAA
TCCCTAGTCACACAGTATTTGAATGCCACTGGCAATCGCTGGTGCAGCTGGAGTTTGTCTCAGGCAAGGCTCCTG
ACTTCCTTCTTGCCGGCTCAACTTCTCCGACTCTACCAGCTGATGCTCTTACCCTGCCAGGGACCCCTGTTTTTC
AGCTACGGGGATGAGATTGGCCTGGATGCAGCTGCCCTTCTGGACAGCCTATGGAGGCTCCAGTCATGCTGTGG
GATGAGTCCAGCTTCCCTGACATCCCAGGGGCTGTAAGTGCCAACATGACTGTGAAGGGCCAGAGTGAAGACCCT
GGCTCCCTCCTTTCTTGTTCGGCGGCTGAGTGACCAGCGGAGTAAGGAGCGCTCCCTACTGCATGGGGACTTC
CACGCGTTCTCCGCTGGGCTGGACTCTTCTCCTATATCCGCCACTGGGACCAGAATGAGCGTTTTCTGGTAGTG
CTTAACTTTGGGGATGTGGGCCTCTCGGCTGGACTGCAGGCCTCCGACCTGCCTGCCAGCGCCAGCCTGCCAGCC
AAGGCTGACCTCCTGCTCAGCACCCAGCCAGGCCGTGAGGAGGGCTCCCCCTCTTGAGCTGGAACGCCTGAAACTG
GAGCCTCACGAAGGGCTGCTGCTCCGCTTCCCCTACGCGGCCTGACTTCAGCCTGACATGGACCCACTACCCTTC
TCCTTTCCTTCCCAGGCCCTTTGGCTTCTGATTTTTCTCTTTTTTAAAAACAAACAAACAACTGTTGCAAAAAA
AAAAAAAAAAAA

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FIGURE 49

MSQDTEVDMKEVELNELEPEKQPMNAASGAAMSLAGAEKNGLVKIKVAEDEAEAAAAAKFTGLSKEELLKVAGSP
GWRTRWALLLLFWLGWLGMLAGAVVIVRAPRCRELPAQKWWHTGALYRIGDLQAFQGHGAGNLAGLKGRLDYL
SSLKVKGLVLGPIHKNQKDDVAQTDLLQIDPNFGSKEDFDSLLQSAKKKSIRVILDLTTPNYRGENSWFSTQVDTV
ATKVKDALEFWLQAGVDGFQVRDIENLKDASSFLAEWQNITKGFSEDRLLIAGTNSSDLQQILSLLESNKDLLLT
SSYLSDSGSTGEHTKSLVTQYLNATGNRWCSWSLSQARLLTSFLPAQLLRLYQLMLFTLPGTPVFSYGDEIGLDA
AALPGQPMEAPVMLWDESSFPDIPGAVSANMTVKGQSEDPGSLLSLFRRLSDQRSKERSLLHGDFHAFSAGPGLF
SYIRHWDQNERFLVVLNFGDVGLSAGLQASDLPASASLPKADLLLSTQPGREEGSPLELERLKLEPHEGLLLRF
PYAA

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FIGURE 50

GTCCGTA CTGCAGAGCCGCTGCCGGAGGGTCGTTTTAAAGGGCCGCGTTGCCGCCCCCTCGGCCCGCCATGCTGC
TATCCGTGCCGCTGCTGCTCGGCCCTCCTCGGCCCTGGCCGTCGCCGAGCCCCGCGTCTACTTCAAGGAGCAGTTTC
TGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAGTCAGATTTTGGCAAATTCGTTCTCAGTT
CCGGCAAGTTCTACGGTGACGAGGAGAAAGATAAAGGTTTGCAGACAAGCCAGGATGCACGCTTTTATGCTCTGT
CGGCCAGTTTCGAGCCTTTCAGCAACAAAGGCCAGACGCTGGTGGTGCAGTTCACGGTGAAACATGAGCAGAACA
TCGACTGTGGGGGCGGCTATGTGAAGCTGTTTCCTAATAGTTTGGACCAGACAGACATGCACGGAGACTCAGAAT
ACAACATCATGTTTGGTCCCGACATCTGTGGCCCTGGCACCAGAAGGTTTCATGTCATCTTCAACTACAAGGGCA
AGAACGTGCTGATCAACAAGGACATCCGTTGCAAGGATGATGAGTTTACACACCTGTACACACTGATTGTGCGGC
CAGACAACACCTATGAGGTGAAGATTGACAACAGCCAGGTGGAGTCCGGCTCCTTGGGAAGACGATTGGGACTTCC
TGCCACCCAAGAAGATAAAGGATCCTGATGCTTCAAAACCGGAAGACTGGGATGAGCGGGCCAAGATCGATGATC
CCACAGACTCCAAGCCTGAGGACTGGGACAAGCCCGAGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGGACT
GGGATGAAGAGATGGACGGAGAGTGGGAACCCCGAGTATTGACAACCCCGAGTATTCTCCCGATC
GGCAGATCGACAACCCAGATTACAAGGGCACTTGGATCCACCCAGAAATTGACAACCCCGAGTATTCTCCCGATC
CCAGTATCTATGCCTATGATAACTTTGGCGTGCTGGGCCTGGACCTCTGGCAGGTCAAGTCTGGCACCATCTTTG
ACAACTTCCTCATCACCACGATGAGGCATACGCTGAGGAGTTTGGCAACGAGACGTGGGGCGTAACAAAGGCAG
CAGAGAAACAAATGAAGGACAAACAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAGACAAGAAACGCAAAG
AGGAGGAGGAGGCAGAGGACAAGGAGGATGATGAGGACAAAGATGAGGATGAGGAGGATGAGGAGGACAAGGAGG
AAGATGAGGAGGAAGATGTCCCCGGCCAGGCCAAGGACGAGCTGTAGAGAGGCCTGCCTCCAGGGCTGGACTGAG
GCCTGAGCGCTCCTGCCGAGAGCTTGCCGCGCCAAATAATGTCTCTGTGAGACTCGAGAACTTTCATTTTTTTC
CAGGCTGGTTCGGATTTGGGGTGGATTTTGGTTTTGTTCCCTCCTCCACTCTCCCCACCCCTCCCCGCCCTT
TTTTTTTTTTTTTAACTGGTATTTTATCCTTTGATTCTCCTTCAGCCCTCACCCCTGGTTCTCATCTTTCTT
GATCAACATCTTTTCTTGCTCTGTGCCCTTCTCTCATCTCTTAGCTCCCCTCCAACCTGGGGGGCAGTGGTGT
GGAGAAGCCACAGGCCTGAGATTTTATCTGCTCTCCTTCTGGAGCCCAGAGGAGGGCAGCAGAAGGGGGTGGTG
TCTCCAACCCCCCAGCACTGAGGAAGAACGGGGCTCTTCTCATTTTCAACCCCTCCCTTTCTCCCCTGCCCCCAGGA
CTGGGCCACTTCTGGGTGGGGCAGTGGGTCCAGATTGGCTCACACTGAGAATGTAAGAACTACAAACAAAATTT
CTATTAAATTAAATTTTGTGTCTC

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FIGURE 51

MLLSVPILLGLGLAVAEPVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFY
ALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPSLDQTMHGDSEYNIMFGPDICGPGTKKVHVIFNY
KGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKI
DDPTDSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQIDNPDYKGTWIIHPEIDNPEYS
PDPSIYAYDNFGVLGLDLWQVKSgtIFDNFLITNDEAYAEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKK
RKEEEEAEDKEDDEDKDEDEEDEDKEDEEEDVPGQAKDEL

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FIGURE 52A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCCT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCCTTTT
CCAGGCCGGGAAAGCAGGAGGGAGAGGGGCCCGGGCTGGCCATGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTTCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACTGGTGGTGTGAGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACCTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTTGTCTTTTGTGTTTTAGGGTGAACTTAAAAAAAATCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAGCATTGGTGCTTATTGAAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTGTCTCAGCCACCTGTTACTAAGTCAGGAGTGATGTTGGAT
CTCTACATTAATGTCTCTTGTCTGTCTACAGTAGCTGTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTATTGCAGACACC
ACCATATTGCTATCTAATGGGGAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAGGGTAATGTGGCCTTGGCATTTCCTC
TTAGAAAAAACTAATTTTGGTGCTGATTGGCATGTCTGGTTTACAGTTTAGCATTTGTTATAAACATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGCCCCCTCCCTTCTGCCCCAGTCTGGGTTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTTCTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTCCCATCACAACATTCTCA
GACAAGCCTGTAACTAAATCTGTTACCATTCTGATGGCACAGAAGGATCTTAATCCCATCTCTATACTTCTC
CTTTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTTGGCATTGTTTCC
CTTTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACGCGTACTTGAATTTTTC
TTCTCTCCACTTCTTAGAGGCATTGAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTTGTTAAAATATTTGCCTTTTAAAGTAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTCATAGTATGAGGGTTGAAGACGGAAAAACAATCTA
AGGGTCTCTCATTTTTTTAATTTTGTGTTTGTTCAGTTTGGTTTTTTTTTTTTTTTGGCGTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTACAGAGTGCTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTCTTCTGCTACTGGA
AAAGCCCTTCCGTAGTTTGTGTTTCTTCTGGTAGCATATTGATGGTTGTTTTTTTTTTTTTCTTTTTTGGTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTACGCTTTTGTGTTTATAATACCTCACAACCGTACAGTTTCTGCTTGGGAGCCCA
TTCGATGAGGAATACAGAAGCAGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATA
CATTGAACCAAGGGATCCTCCCTCCCCTTCAAAGCAGACGTTTCAAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCA
TCTTGGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTGAAGTTTTTCCCTCCGTCTTT

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FIGURE 52B

CCCCCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGTCTTCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGTCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCTAAAATTCTAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCTGGGCCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCTTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTCATGGTGACTGACC
CTTGAGCTTAAACAGAAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACTTTCCACTCTTCTCTGTAGTCCCAGGCCCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTTGTTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTTGTTC
GAGGAGCTCTCCCCCTTGGATTTGAACTTGCTCTTTTTGTGTGTGTGTTCTTTCTCTTCTTTTCTTACCTCCC
ACTAAAGGGGTTCAAAATTATCCTGGTCTTTTTCTACCTTGTTGTGTTTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCAGCCTGCCAAATTTTGATCCTTCCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCCTCCGAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCTGACAGCATCACGCTGCATCCCATTTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGACCTTATGTATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCCTTAAGCCAACAAACCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTCATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCCTCATACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCTTATTCTCGGC
TCAGGTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCC
TACTTTGGGGAAAATAAAGTGCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTC
TGAAAAACAAGTTTCTATTTTTTATTTTTTAATTGGTTTAGTTCTTAACTGCTGGCCAACCTTACATCCCCAGCA
AATCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCTTATATCATGTACCTCAGATCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTTTTTTTTTGCTTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCAGTGTTAAGTGAT
TTAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 53

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQOREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAAICGLQQDEEVSSLTC
DALTELLAKITNTDVEDCLKACQEQIEAVLLNSLQYRQDQRDGSKSEDELDQASTPTDVRDIDL

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FIGURE 54A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCT
ATTTAGCCAAAGGAAGGAGGTCAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCTTT
CCAGGCCGGGGAAAGCAGGAGGGAGAGGGGCCCGGGCTGGCCATGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGAAGTGGTGGTGTGAGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTTGTCTTTGTGTTTTAGGGTGAACTTAAAAAAAAAATCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAAGCATTGTTGCTTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCTCTTGTCTGTCTACAGTAGCTGCTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTATTGCAGACACC
ACCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAAGGGTAATGTGGCCTTGGCATTCTTC
TTAGAAAAAACTAATTTTTGGTGTCTGATTGGCATGTCTGGTTCACAGTTTAGCATTTGTATAAACATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGCCCCCTCCCTTCTGCCCCAGTCTGGGTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTCCTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTCCCATCACAACATTCTCTCA
GACAAGCCTGTAACTAAAATCTGTTACCATTTCTGATGGCACAGAAGGATCTTAATTTCCCATCTCTATACTTCTC
CTTTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTGTTCC
CTTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTTT
TTCCTCTCCACTTCTTAGAGGCATTACAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTGTTAAAAATATTGTCCTTTTTAAGTAAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTA
AGGGTCTCTCATTTTTTTTAAATTTGTTTTGTTTCAGTTTGGTTTTTTTTTTTTTTTTTTCGCTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCAGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAACCCCTCCGTAGTTTGTCTTCTCGGTAGCATATTTCATGGTTGTTTTTTTTTTTTTCTTTTTTGGTTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTCACGCTTTTGTCTTCAATAACCTCACAACCGTACAGTTTCTGCTTGGGAGCCCA
TTCGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATA
CATGAAACCAAGGGATCCTCCCTCCCTTCAAAGCAGACGTTTCACTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAAATCCACCAGGCTGTTTGGAGATCCTCA
TCTTGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTGAAGTTTTTCCCTCCGTCTTT

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FIGURE 54B

CCCCCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCTAAATTCTAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCCTGGGCCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCCCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTATGGTGAAGTACC
CTTGAGCTTAAACAGAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACCTTTCCACTCTTCCTGTAGTCCCGAGGCCCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGCCCCCTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTGTGTTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCCTCA
GAGGAGCTCTCCCCCTTGGATTTGAACCTGCTCTTTTGTGTTGTTGTTCTTTCTCTCTTTTCTTACCTCCC
ACTAAAGGGGTTCCAAATTATCCTGGTCTTTTTCTACCTTGTGTGTTTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCTGACAGCATCACGCTGCATCCATTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGACCTTATGTCATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCTTAAAGCCAACAAACCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCCTCATACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCCTATTCTCGGC
TCAGGTTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCC
TACTTTGGGGAAATAAAGTGCCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTCT
TGAAAAACAAAGTTTCTATTTTATTTTAAATTGGTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCAGCA
AATCATCGGGCCATTGGATTTTTCATTATGTTTATCACCCTTATATCATGTACCTCAGATCTCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTCTTTTTTTTTTGTCTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCTGTTAAGTGAT
TTAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 55

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQOREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAICGLQQDEEVSSLTC
DALTELLAKITNTDVDCLKACQEQIEAVLLNSLQQYRQDQRDGSKEDELDQASTPTDVRDIDL

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FIGURE 56A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAAGGGGAGGACCGGTGCGAGTAAGGCAGCCCCGAGGCTCTGCTC
GCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCTT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCCCTCCCCTTCCAAAAAACAAAACAGAAAAACCCCTTT
CCAGGCCGGGGAAAGCAGGAGGGAGAGGGGGCCCGGGGCTGGCCATGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTTGGCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACCTGGTGGTGTGAGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTTTGTTCTTTGTGTTTTAGGGTGAACTTAAAAAAAAAATTCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAAGCATTGTTGGTGCCTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTCATGTTA
TGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTGC
AAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGAAGGAGTACAAAACAATCTCTCAACA
TGATTGAACCATTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGATC
TCTACATTAATGTCTCTTGCTGTCTACAGTAGCTGCTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACAC
AGGTGATTGGCTCCTGGGTTTTATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTCATTGCAGACACCA
CCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAGA
CCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAGGGTAATGTGGCCTTGGCATTCTTCT
TAGAAAAAACTAATTTTTGGTGCTGATTGGCATGTCTGGTTCACAGTTTAGCATTGTTATAAACCATTCCATTC
GAAAAGCATTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTATGCAAGTCATGCTGAATACTCCTCCCC
TCTTCTTTTTGCCCCCTCCCTTCCCTGCCCCAGTCTGGGTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGGT
ACACAGTTCTGGTGTTCTTACCAGGACTCAAGAGACACCCCTTCCCTGCTGACATTCCTCATCAACATTCTCCTCAG
ACAAGCCTGTAACTAAATCTGTTACCATCTGATGGCACAGAAGGATCTTAATTCCTCATCTCTATACTTCTCCT
TTGGACATGGAAAAGAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTGTTCCCT
TTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTTCTT
CCTCTCCACTTCTTAGAGGCATTACAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTTTGCACAAT
TGTAATTGACAGGTAATGAAGCTATTTGTTAAATATTTGCCTTTTTAAGTAAAAAGAAAAATCAGAACAGGGC
TATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTAA
GGGTCTCTCATTTTTTTAATTTGTTTTGTTTCAGTTTGGTTTTTTTTTTTTTTTGGCGCTGCTAAGAAGCTAAAGT
CATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTTT
TATAATATATATTTTACTGCTTAAATTCGAAGTCTGAAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGAA
AAGCCCTTCCGTAGTTTGTGTTCTTCTGGTAGCATATTGATGGTTGTTTTTTTTTTTTTCTTTTTTGGTTTTTTGGT
TTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTACCTCAGGTTTACTGGACAAAATCAATAA
CTACAAAAGGCAATGATTACGCTTTTGTGTTTCATAATACCTCACACCGTACAGTTTCTGCTTGGGAGCCATT
CGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCCCA
GGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATACA
TTGAACCAAGGGATCCTCCCTCCCCTTCAAGGCAGACGTTCAGTACAAACATTTATGCGGTAGGCTCAGATGTG
TAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCATC
TTGGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTTGAAAGTTTTTCCCCTCCGTCTTTCC

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FIGURE 56B

CCTCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCTAGGTCTGAATCTGCGAGTAGATGA
ACCTGCAGCAAGCAGCGTTTATGGTGCCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGCAA
GCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAATAG
GTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATGAG
TCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCATAAATTCTAGGGGATT
TCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCCAG
AGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCTGGGCCCCAAGGAGTCCCACGGAATGGGGAAAGTGGG
AACCCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTCATGGTGACTGACCTT
TGAGCTTAAACAGAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTTAC
AGTCTGTAACTTTCCACTCTTCTGTAGTCCCAGGCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTTGG
GGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTTGTTAGGCTTTTCTGCCTGCTCCTGC
TTAAACACAAGAAGGAATCCTGGATTTTGCCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCAGAG
GGAGCTCTCCCCCTTGGATTTGAACTTGCTCTTTTTGTGTTGTTGTTCTTTCTCTTCTTTTTCTTACCTCCCAC
TAAAGGGGTTCCAAATATCCTGGTCTTTTTCTACCTTGTTGTGTTTCTATCTCGTCTTTACTTCCATCTGTTTG
TTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCCTCTTTTGGCCAA
ATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAACA
GCCAAGAAGCCTGCAGGAGAAAGCCAAAGGGCAGTTCCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGCTC
CTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCATGC
CTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCAGG
GGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCCCTGACAGCATCACGCTGCATCCATTGCTAGC
AGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGCCC
TGGGAGCTCTGGGACTGAAAGGTAAAGAACATAAGGCAGGATCAGATGACTCTCTCAAGAGGGCAGGGGAATTT
TCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGACCTTATGTATGTAATAATTGATT
TTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAGTT
GGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGGAA
ATTAATGCTGAGATGATAAAGTCCCCTTAAGCCAACAAACCTCTGTAGCTATAGAATGAGTGCAGGTTTCTATT
GGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTCATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATTCA
AGAGGATATTTATTACTTCCTCATAACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCATT
TCAGGCACAACGATACTACATTTCGTGTGTGCTGCTTTTAACTTGGCTGGGCTATCAGACCCTATTCTCGGCTC
AGGTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCCTA
CTTTGGGGAAATAAAGTGCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTTG
AAAAACAAAGTTTCTATTTTTTATTTTTTAATTGGTTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCCAGCAA
TCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCCCTATATCATGTACCTCAGATCTCTCTCTCTCCT
CTCTCTCAGTTATATAGTTTCTGTCTTGGACTTTTTTTTCTTTTCTTTTCTTTTTTTTTTTTTTGCTTTAAACA
AGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGTCA
GGATGTTAGAAAGTGTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATGTT
GTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCAGTGTAAAGTGATT
AAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGTTTTGAATGCAATTAGGTTATGC
TATTTGGACAATAAACTCACCTTGACCT

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FIGURE 57

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQOREKLSLIRKHAQTFIALCATDFKFKAMYPPSMIATGSVGAICGLQQDEEVSSLTC
DALTELLAKITNTDVEDCLKACQEQIEAVLLNSLQQYRQDQRDGSKSEDELDQASTPTDVRDIDL

FIGURE 58A

[illegible]

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FIGURE 58B

ATGTTTAGCAAATGGCTCTGACAGGGTGGCCATGAGCAGATGAGACCAGCTCTTGCTTGGTTGGAAGCCACACTG
CAGTTTGCAGTTTAGCCTTTGGTGTCTCAGTGGCCTCTTGCTTATTCCATGCTTTTTCTATCCCATCCTCTCTCT
GTGCCCTCCTGCAATGGCAGCCTTGGCACAATGCCTGGGTGTCTCATCCTTGCTTTACTCTGGAAAGTGTGGGG
ATGGAGAGGATGGTGCATTTCAGTGCTTCCTTACCTGTCAATAACAATGGTGGCCACCTGGGTCCCAGCACTTG
GCTGGTGGAGAGATTTTTTTCATTATGGAGCTAATAAAGGGTCCCTACGTTTTACATTGATTAATGAATTATCAC
CCAGACATGTGCAGATGAAATGTCAATATAAGAAAAATCAAGGTATTTGGGAAACATGGGCATAATCAGGTAGTT
TTGCTAAAATTCTCTTCTTGGTCTACATAAAGAAGACATGGGTCTGTCAAGAATGGGGACATTAGACTGAAA
ACTGGGACAACCCCTTCTTATTTTTATAGAGACTAGGAGTTAAGGGGCTGCCTAAGATTGCAGTGATAAAGAA
CTGAACCCTAAATCAGCTCCCACTAATGAAACCCTGCTTTCCTTGTATCTTTTAAACTCAGTTCTGCATCCAAC
TGAGAAGAAAAAAGCTTCTTCCATATCAAGTACCATATGAGTTTCAATTTAAACTGCACCTTGAGAAATGCATT
GCCAGAAAGCACCAGTAGCCTCCTATCTGCAAGCAGAGTAGTGCTCTGCTCTGGGGAGGGGTGATTGGAAACCAT
AATGCAGAGTGGGCCCCCTACTCCATTTCCAGCAAAAGGCTCCAGCTGGAGGGATGGGTGTGGGGCAACCTGG
TTCCTGCTAACTGCCAGATTGAATGTGTGGGCTAGAATGCCTGCGCATTTAGTTAAACTGGGCTCAGCATGCTTG
TCCTCAAAATGTCCATCCTGGTCACAGCACACAAGATGGCTATTGGTCTGCTTTTACCCTACCCTGTACTATACA
TGAAAATTCCAGTTATTAACACACTCAAACCTGGTGGAGCTTGTTACCCCTAGGAAGGGGATTGTATATATGGCAG
GCTTCCCTGGTGCCGATGTAAAGGGCTACATTTGGGAACATTTGACTTCTTGGGACTCTTAAGTGCATACTGAT
GGCATGAAGTAAAAGGGGCTCAATGATGATAGGAAAATCAGTTCTTTTAAAATTTCTTCAAGAAAATCCAGGCT
ATCACATAGTCTTTCTGTGTGACTTATTAGGAGATAGGAAGAGCATTGGGAACTTGACAGCTAGCTATGCATC
TACATTTTGGTTTGGGGTAGTTATGAAATGTTCTTAATATGACGTGTTCAATAACTTCACATAAACTTCTGT
CTCCAAAACCTCAAAGAGATAGAGTTAATGAGTTGTTGTTTTTTTTTAAATGGGGGTAGTTTCTATCTGTCTATG
GGCTCTAGCATCTACTCCGCTACCCAATTCTGTCTATCTCCAAGCTGAGTTTCTCTCTGAGGCAGAGGCTGGAG
CAGTTCTTTTTCAGTTCTCATCCTCTCCATCCCAATCCAGTATATCAATCAACTCTAACTCGGAGACGTCTAGCT
GGCAATGTTTCTAAAACCTTCACTGGATTCTTTTAGACATTGAAGCAAAACATTTTTTCTAAGAATTGCTTCTCA
GATGATGATATCAAAATGTATATGCTTTTGCAAGTTTGAAAAGTTCAAAATTAACCACTTTTGACTAGGTAAGTCTT
TCTAAAACCATTTAAAGCTAACTGGGTCTTAGCATCCTCCTGTGTATGGAAGAGACAGGTGACCGCTCCAGGTT
GGGTGCTCACAGAACCTTTTCTGACTCTCATGGAAGATGGTGGAAAGGAAAATAGACTGTCTCATCAACCCTCC
TGTGTCTCTGAAGCAATCTCAGTTTTTATTAACCACCTCTTCTGTGTTTCTGGTAGCTATTTAACCTGTATTTA
ATCTGTACTTCTATGCCAGCCTCAATTTTATTTGATTTTTTAAATTAATCTCTTCTAACCAATGAAGTGTGTTGT
CAGTATGCCCCAAAGCTTGCTCTTTTGTGCTCCCTTTTGAATAACTTTCTATCCAGAAAAAGAGATTATTTGGGA
CTTGAGATTTGCAGTGATACCACTTATAGCAATGATGTACTTTAAGGGAACTACCCAATATGTTGTGATAGAA
GAAAGAGAAACCTTCACTTTGGCATTTTTTTTTAACTACTGTTTATTTTTCTGTTTGGCGCCAGGAAGCAGTGGG
AGGTGGTGGCAGATATGCTTTGCATATGGATTGTTATGTTTTTATTTGGGCAAGTTTAAATCATGGAAGAACTCAA
AAGAAGGGGGGAAATGGTCAGTTTAAAGCCAAAAGAACTTTCTAAACAATGTATAGGTACACAGCAAAATTAAC
AAATCCAACAATTTCTGAAGCTTAGTGTAATTGAGTGGTGGTTGTTATTCAATAAAATTATTTCCAAAAGTGT
CTCCTAAGAGTGCAGTTCCCATGAGTCACTTCTGAACCCATTGACCAAGGTGGACAGAGACAATCCTGTAGAC
CTTGACATTTCAGAAAGATGTGAGCTGCTTACTGATCATATATGCATACGTTTCTTTACAGCAGAGGAAACCAT
TCCACAAAACCTGATGTTCTTTTGGGGTTTTATGTACAGACTTGTCCAATCATGTGTGTGGTTTCTGCGAGTTGCT
GATGACTCCGCATTGAAGCTCTCTGAGTTCTTTGATTTTAAAGTTGGGTTTATGGAATTTTTTCAAATGTTGGAAG
GCGTGTGGTTCTTCTGCCCTCCCTCCCTTTTGGAAATATGAAAGCAAATGTTTAGAAGAATTCCTTTGAAAA
GCTGTGTGCTGTTCCCTGTGAACTGAGCAGGTGTGTGTTGGCGCGCTAAGTGCCACATGCTTGTGTGTAGAGGA
GGAGGTGGCCCTGCCGCTCCGCGCTGCTGTGCTGTGATCCCTACCTGCTCCCCGCTCCTGTTGCCAGCAGCAC
TCACTGCACTCCTTTGTATATACTCTGCATCACTGTCTACTCACAACCTTCGTGAATAAAGTTGTGTGCTTTAT
TCGTC

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FIGURE 59

MFTEGEE MYLQGSTVWHPDCKQSTKTEEKLRPTRTSSESIYSRPGSSIPGSPGHTIYAKVDNEILDYKDLAAIPK
VKAIYDIERPDLITYEPFYTSGYDDKQERQSLGESPRTLSPTPSAEGYQDVRDRMIHRSTSQGSINSPVYSRHSY
TPTTSRSPQHFRPGNEPSSGRNSPLPYRPDSRPLTPTYAQAPKHFHVPDQGINIYRKPP IYKQHAALAAQSKSS
EDI IKFSKFPAAPADPSETPEIETDHWP GPPSFAVIGPDMKRRSSGREEDDEELLRRRQLQEEQLMKLNSGLGQ
LILKEEMEKESRERSLLASRYDSPINSASHIPSSKTASLPGYGRNGLHRPVSTDFAQYNSYGDVSGGVVDYQTL
PDGHMPAMRMDRGVSMPNMLEPKIFPYEMLMVTNRGRNKILREVDTRLERHLAPEVFREIFGMSIQEFDRPLW
RRNDMKKKAKLF

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FIGURE 60

GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA
CTTAACCTCATTCTCTTTTCCAGAGCATTTAGCCTTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA
CTTGAGTTCTGCCTCGCTTCCCGGCGCGGTGCGCAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTACT
GAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAAGTCTACGAATTGTTAGACAGTCCAGGAAAAAGTCTCT
CCTGCAGTCCAAGGACCAGATTACAGCAGGAAAATGCAGCTAGAAAAAACACCTGGAAGGAAAAAGCTGCAATCTC
AAATAAAATCACCAGTTGTATTTTTCAGTTATTACAGGAAGCAGGTATTAAAACTGCCTTCCACCAGAAAAATGTGG
GGAGACAGCTTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC
TTTTCTCAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGA
TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT
AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAAATCCTGGTTGCC
CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTGATGTAACCACCAAAGAAATTGTTCTTGCTGA
TGTTATTGACAATGATTCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
GGACCTCAAAGAAGTAACCTCTGAAGGGCTCCAAATGGTAAAGAAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA
GTTGCTTTTGAATCAGAAAGTCAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA
AAAAATCAAGAAGGCCTGTGGAAATTTTGGCATTCCATGTGAACCTTCGAGTAACATCTGCGCATAAAGGACCAGA
TGAAACTCTGAGGATTAAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGCAGTGGCAGGCAGAAG
TAATGGTTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCTCTCCCTCACACCAGACTG
GGGAGTTCAGGATGTGTGGTCTTCTCTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG
ATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATTGTTGATGGAGCAAACCTGCGAGCAAGCATT
GAACACATGGATTTCTTGAAGCAGGCTGACAAGAAAATCAGAGAATGTAATTTATAAGAAAAGAAATGCCATTGAA
TTTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAATCAAGCAAGATGAAAAGGTAATTTTAAAT
TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAACCC
CCTCCTTTCTTAGGCTAGACACCAAGATATTTTCAGCCAGCCTTTATCATTCTCTTACTTTATCCTTTTTCTCTTA
AGTATTGGTGGTCACTACTATTGAGTTTCTCTTAAACACTGATTAAATGATCTTAACTCCCTCAGCTAAAACCTG
GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCAATTTTTTTTTTTTTTTTTTGGAGACAGGGTCTCACTGTCTG
CCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCACGTGCTGCTTTCCCTCCTGGGCTCAAGCAGTTCTCCACCT
CAGCCTCTCGACTAACAGGGACTATAATCTTGACAGCACCATGCCGAGCTAATTTTATTTTGTAGAGATGAGCT
CTCACTATGTCACCCAGGTTTCGTCTCAAACCTCCTGAACCCTAGTAATTTCTCTATCTCAGCCTCCCAAAGTGCTA
GGGTTACAGACATGAGCCACTGTGCCTGTCTAGACTTGTACTTTCAACTGTCCATTTCTCCCTGTCTGTCCCATG
GGCACTCATGAAAAAACAGAAATGCTCCCAACTTTATTTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT
GCAAGTCAGAAGCTTGATTTTCATCATTTGATGTTTTTCTCACGTTTCACATCTCACTCATACCAAGTCATGTTGG
TGTTAATTTCTGATTAACCCCTGAATTTACCGTCTTCTCATCCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
CAACATTATCCTGATCTAGACAGCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGCCCAAGGACTTCTAAC
AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA
CATAAACTTACCAACAGATTTTCATTGGTTCTTGGGTTCTCCGAAGCCTATCCATGGTTTATAGATTAAGAATT
GATGAGGTAGCTGGGCACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAGTAGCCAGC
CGTGATGACAGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCCGGGAGGCGGA
GGTTGCAGTGAGCCTGGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAAGACTCTGTCTCAAAAGGGGAA
AAAAAAATTTGCTGATGTGACCCATGAAGGGAACCTATTTTCTCGTAATTTTGGACTGCCACACATTGGTACCT
TTAGTTCTCTGAAGGCCCACGTTTTTATCATTAAAGACCTATTTGTTAGCTAGTAGAGCTTTATGTTTCGCTGTCCA
TGAAACCTTCTGTAACCACAGTGACTACAAGTAGTTCTTCTCTATTGAATTATTAGGTCCAGAATAGAAGATGT
CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTA
AATTATAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTTAAAGGACTTAGAA
GATTAAAAA

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FIGURE 61

MATAEVLNIGKKLYEGKTKEVYELLDSPGKVLLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLOEAGIKT
AFTRKCGETAFAIAPQCEMIPIEWVCRRIATGSFLKRNPVGKEGYKFYPPKVELFFKDDANNDPQWSEEQLIAAKF
CFAGLLIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDNDSWRLWPSGDRSQQ
KDKQSYRDLKEVTPEGLQMVKKNF EWVAERVELLLKSESQCRVVVLMGSTSDIGHCEKIKKACGNFGIPCELRVT
SAHKGPDETLRIKA EYEGDGIPTVFVAVAGRSNGLGPVMSGNTAYPVISCPPLTPDWGVQDVWSSLRLPSGLGCS
TVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKIRECNL

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FIGURE 62

GAAAGCTGATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA
CTTAACCTCATTTCTCTTTTCCAGAGCATTTAGCCTTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA
CTTGAGTTCTGCCTCGCTTCCCGGCGCGGTGCGAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTA
GAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAGTCTACGAATTGTTAGACAGTCCAGGAAAAGTCCT
CCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAAAAACACCTGGAAGGAAAAGCTGCAATCTC
AAATAAAATCACCAGTTGTATTTTTTTCAGTTATTACAGGAAGCAGGTATTAAACTGCCTTACCAGAAAATGTGG
GGAGACAGCTTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC
TTTTCTCAAAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGA
TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT
AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTGAAATACTGGAGAAATCCTGGTTGCC
CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTGATGTAACCACCAAGAAATTGTTCTTGCTGA
TCTTATTGACAATGATTCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
GGACCTCAAAGAAGTAACCTCTGAAGGGCTCCAAATGGTAAAGAAAACTTTGAGTGGGTTCAGAGAGAGTAGA
GTTGCTTTTGAAATCAGAAAGTCAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA
AAAAATCAAGAAGGCCTGTGGAAATTTTGGCATTCCATGTGAACCTCGAGTAACATCTGCGCATAAAGGACCAGA
TGAAACTCTGAGGATTAAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTTGGCAGTGGCAGGCAGAAG
TAATGGTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCTCCCTCACACCAGACTG
GGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG
ATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATTGGTATGGAGCAAACCTGCGAGCAAGCATTTT
GAACACATGGATTTCTTGAAGCAGGCTGACAAGAAAAATCAGAGAATGTAATTTATAGAAAGAATGCCATTGAA
TTTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAAATCAAGCAAGATGAAAAGGTAATTTTAAAT
TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAACC
CCTCCTTTCTTAGGCTAGACACCAAGATATTTAGCCAGCCTTTATCATTCTCTTACTTTATCCTTTTTCTTCTA
AGTATTGGTGGTCACTACTATTGAGTTTCTTCTTAACTGATTAAATGATCTTAACTCCCTCAGCTAAAACCTG
GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCATTTTTTTTTTTTTTTTGGAGACAGGGTCTCACTGTCTG
CCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCACTGCTGCTTTCCCTCCTGGGCTCAAGCAGTTCTCCACCT
CAGCCTCTCGACTAACAGGGACTATAATCTTGAGCACCATGCCGAGCTAATTTTATTTTTTTGTAGAGATGAGCT
CTCACTATGTCACCCAGGTTCTGCTCAAACCTCCTGAACCTTAGTAATTTCTCTATCTCAGCCTCCCAAAGTGCTA
GGGTTACAGACATGAGCCACTGTGCTGTCTAGACTTGTACTTTCAACTGTCCATTTCTCCCTGTCTGTCCCATG
GGCACTCATGAAAAAACAGAAATGCTCCCAACCTTTATTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT
GCAAGTCAGAAGCTTGATTTTCATCATTGATGTTTTTCTCAGTTCACATCTCACTCATCACCAGTCATGTTGG
TGTTAATTTCTGATTAAACCTTGAATTTACCGTCTTCTCATCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
CAACATTATCCTGATCTAGACAGCCCCATTCTCAATCCACCTTTTCCAAGTTGATTGCCCCAAGGACTTCTAAC
AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA
CATAAACTTACCAACAGATTTTCATTGGTTCTTGGGTTCTCCCGAAGCCTATCCATGGTTTATAGATTAAGAATT
GATGAGGTAGCTGGGCACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCTGTCTCTACTAAAAATACAAAAGTAGCCAGC
CGTGATGACAGGCACCTGTAATCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCGGGAGGCGGA
GGTTGCAGTGAGCCTGGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAAGACTCTGTCTCAAAAGGGGAA
AAAAAAATTTGCTGATGTGACCCATGAAGGGAACCTATTTTCTCGTAATTTTGGACTGCCACACATTGGTACCT
TTAGTTCTCTGAAGGCCACGTTTTTATCATTAAAGACCTATTTGTTAGCTAGTAGAGCTTTATGTTTCGCTGTCCA
TGAAACCTTCTGTAAACACAGTGACTACAAGTAGTTCTTTCTCTATTGAATTATTAGGTCCAGAATAGAAGATGT
CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTGAGAGATTAGTA
AATTATAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAGGACTTAGAA
GATTAAAAA

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FIGURE 63

MATAEVLNIGKKLYEGKTKEVYELLDSPGKVLLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQEAGIKT
AFTRKCGETAFIAPQCEMPIEWVCRRITGSFLKRNPGVKEGYKFYPPKVELFFKDDANNDPQWSEEQLIAAKF
CFAGLLIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDNDSWRLWPSGDRSQQ
KDKQSYRDLKEVTPEGLQMVKKNF EWVAERVELLKSESQCRVVLMGSTSDLGHCEKIKKACGNFGIPCELRVT
SAHKGPDETLRIKAEYEGDGIPTVFFVAVAGRSNGLGPVMSGNTAYPVISCPPLTPDWGVQDVWSSLRLPSGLGCS
TVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKIRECNL

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FIGURE 64

TCGCTGCGAAGGACATTTGGGCTGTGTGTGCGACGCGGGTCGGAGGGGCAGTCGGGGGAACCGCGAAGAAGCCGA
GGAGCCCGGAGCCCCGCGTGACGCTCCTCTCTCAGTCCAAAAGCGGCTTTTGGTTTCGGCGCAGAGAGACCCGGGG
GTCTAGCTTTTTCCTCGAAAAGCGCCGCCCTGCCCTTGGCCCCGAGAACAGACAAAGAGCACCGCAGGGCCGATCA
CGCTGGGGGGCGCTGAGGCCGGCCATGGTCATGGAAGTGGGACACCCTGGACGCTGGAGGCCTGCGGGCGCTGCTGG
GGGAGCGAGCGGGCGCAATGCCTGCTGCTGGACTGCCGCTCCTTCTTCGCTTTCAACGCCGGCCACATCGCCGGCT
CTGTCAACGTGCGCTTCAGCACCATCGTGCGGGCGCCGGGCCAAGGGCGCCATGGGCCTGGAGCACATCGTGCCCA
ACGCCGAGCTCCGCGGGCCGCCTGCTGGCCGGCGCCTACCACGCCGTGGTGTGCTGGACGAGCGCAGCGCCGCC
TGGACGGCGCCAAGCGCGACGGCACCCCTGGCCCTGGCGGCCGGCGCGCTCTGCCGCGAGGCGCGCGCCGCGCAAG
TCTTCTTCCTCAAAGGAGGATACGAAGCGTTTTTCGGCTTCCTGCCCGGAGCTGTGCAGCAAACAGTCGACCCCCA
TGGGGCTCAGCCTTCCCCTGAGTACTAGCGTCCCTGACAGCGCGGAATCTGGGTGCAGTTCTTGCAGTACCCAC
TCTACGATCAGGGTGGCCCGGTGGAATCCTGCCCTTCTGTACCTGGGCAGTGCATACAGCTTCCCAGCAAGG
ACATGCTGGATGCCTTGGGCATAACTGCCTTGATCAACGTCTCAGCCAATTGTCCCAACCATTTTGAGGGTCACT
ACCAGTACAAGAGCATCCCTGTGGAGGACAACCACAAGGCAGACATCAGCTCCTGGTTCAACGAGGCCATTGACT
TCATAGACTCCATCAAGAATGCTGGAGGAAGGGTGTGTGTCCTGTCAGGCAGGCATTTCCCAGTCAGCCACCA
TCTGCCTTGCTTACCTTATGAGGACTAATCGAGTCAAGCTGGACGAGGCCTTTGAGTTTGTGAAGCAGAGGCGAA
GCATCATCTCTCCCAACTTCAGCTTCATGGGCCAGCTGCTGCAGTTTGAGTCCAGGTGCTGGCTCCGCACTGTT
CGGCAGAGGCTGGGAGCCCCGCCATGGCTGTGCTCGACCGAGGCACCTCCACCACCACCGTGTTCAACTTCCCCG
TCTCCATCCCTGTCCACTCCACGAACAGTGCCTGAGCTACCTTCAGAGCCCCATTACGACCTCTCCCAGCTGCT
GAAAGGCCACGGGAGGTGAGGCTCTTCACATCCCATTGGGACTCCATGCTCCTTGAGAGGAGAAATGCAATAACT
CTGGGAGGGGCTCGAGAGGGCTGGTCCTTATTTATTTAACTTCACCCGAGTTCTCTGGGTTTCTAAGCAGTTAT
GGTGATGACTTAGCGTCAAGACATTTGCTGAACTCAGCACATTCGGGACCAATATATAGTGGGTACATCAAGTCC
ATCTGACAAAATGGGGCAGAAGAGAAAGGACTCAGTGTGTGATCCGGTTTCTTTTTGCTCGCCCCTGTTTTTGT
AGAATCTCTTCATGCTTGACATACCTACCAGTATTATTCCCGACGACACATATACATATGAGAATATACCTTATT
TATTTTTGTGTAGGTGCTGCTTTCACAAATGTCATTGTCTACTCCTAGAAGAACCAATACCTCAATTTTTGTT
TTTGAGTACTGTACTATCCTGTAAATATATCTTAAGCAGGTTTGTTCAGCACTGATGGAAAATACCAGTGTTG
GGTTTTTTTTTAGTTGCCAACAGTTGTATGTTTGCTGATTATTTATGACCTGAAATAATATATTTCTTCTTCTAA
GAAGACATTTTGTTACATAAGGATGACTTTTTTATACAATGGAATAAATTATGGCATTTCATTG

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FIGURE 65

MVMEVGTLDAGGLRALLGERAAQCLLLDGRSFFAFNAGHIAGSVNVRFSTIVRRRAKGAMGLEHIVPNAELRGRL
LAGAYHAVVLLDERSAALDGAKRDGTLALAAGALCREARAAQVFFLKGGYEAFSASCPELCSKQSTPMGLSLPLS
TSVPDSAESGCSSCSTPLYDQGGPVEILPFLYLGSAYHASRKDMLDALGITALINVSANCPNHFEGHYQYKSIPV
EDNHKADISSWFNEAIDFIDSIKNAGGRVVFVHCQAGISRSATICLAYLMRTNRVKLDEAFEFVKQRRSIISP NFS
FMGQLLQFESQVLAPHCSAEAGSPAMAVLDRGTSTTTVFNFVPSIPVHSTNSALSYLQSPITTSPSC

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FIGURE 66

TGTCGGGGACGGTAACCGGGACCCGTGCTCTGCTCCTGTCGCCTTCGCCTCCTGAATCCCTAGCCATATGCGTGA
GTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGCCTGGAACA
CGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCCTTCAACACCTTCTT
CAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACAGTCATTGATGAAGT
TCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGATGCTGCCAATAACTA
TGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCAAGCTGGCTGACCA
GTGCACCCGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTGGTGGGGGAACTGGTTCTGGGTTCACCTCCCTGCT
CATGGAACGCCGTGTCAGTTGATTATGGCAAGAAATCCAAGCTGGAGTTCTCCATTTACCCGGCACCCAGGTTTC
CACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGTGCCTTCAT
GGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAAACCTCGATATCGAGCGCCCAACCTACACTAACCTTAA
CCGCCCTTATTAGCCAGATTGTGTCCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTTGACCTGAC
AGAATTCCAGACCAACCTGGTCCCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCTGTCACTCTCTGC
TGAGAAAAGCCTACCATGAACAGCTTTCTGTAGCAGACATCACCAATGCTTGCTTTGAGCCAGCCAACCAGATGGT
GAAATGTGACCCTGGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGGTTCCCAAAGATGT
CAATGCTGCCATTGCCACCATCAAAACCAAGCGCACGATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGT
TGGCATCAACTACCAGCCTCCCCTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCATGCT
GAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCCAAGCGTGC
CTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTCAGAGGCCCGTGAAGATATGGCTGCCCT
TGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGAGAGGAATACTAAATT
ATCCATTCCTTTTGGCCCTGCAGCATGTGCTGCTCCAGAATTCAGCTTCACTTAACTGACAGATGTTAAAGC
TTTCTGGTTAGATTGTTTTCACTTGGTGATCATGCTTTTCCATGTGTACCTGTAATATTTTTCCATCATATCTC
AAAGTAAAGTCATTAACATCA

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FIGURE 67

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTRLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVADITNACFEFAN
QMVKCDPGHGKYMCCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAVHVWYVGEEMEEGEFSEAREDMAALEKDYEYEVGVDSVEGEGEEEGEE
Y

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FIGURE 68

ATCTCTCTCGGGTGGAGTCCTTCTGACAGCTGGTGCGCCTGCCCGGGAACATCCTCCTGGACTCAATCATGGCTT
GTGGTCTGGTCGCCAGCAACCTGAATCTCAAACCTGGAGAGTGCCTTCGAGTGCGAGGCGAGGTGGCTCCTGACG
CTAAGAGCTTCGTGCTGAACCTGGGCAAAGACAGCAACAACCTGTGCCTGCACTTCAACCCTCGCTTCAAGGCC
ACGGCGACGCCAACACCATCGTGTGCAACAGCAAGGACGGCGGGGCCCTGGGGGACCGAGCAGCGGGAGGCTGTCT
TTCCCTTCCAGCCTGGAAGTGTTGCAGAGGTGTGCATCACCTTCGACCAGGCCAACCTGACCGTCAAGCTGCCAG
ATGGATACGAATTCAAGTTCCCCAACCGCCTCAACCTGGAGGCCATCAACTACATGGCAGCTGACGGTGACTTCA
AGATCAAATGTGTGGCCTTTGACTGAAATCAGCCAGCCCATGGCCCCAATAAAGGCAGCTGCCTCTGCTCCCCT
G

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FIGURE 69

MACGLVASNLNLKPGECLRVGEVAPDAKSFVLNLGKDSNNLCLHFNPRFNAHGDANTIVCNSKDGGAWGTEQRE
AVFPFQPGSVAEVCITFDQANLTVKLPDGYEFKFPNRLNLEAINYMAADGDFKIKCVAFD

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FIGURE 70

TCAGAAGCTGATTGCATCCAAAGCAAATGACCACCAAGGTTTTTATCTTCTAAACAGTATAATAGAGCACATGCC
TCCTGAATCAGTTGACCAATATAGGAAACAAATCTTCATTCTGCTATTCCAGAGACTTCAGAATTCCAAAACAAC
CAAGTTTATCAAGAGTTTTTTAGTCTTTATTAATTTGTATTGCATAAAATATGGGGCACTAGCACTACAAGAAAT
ATTTGATGGTATACAACCAAAAATGTTTGGAAATGGTTTTGGAAAAAATTATTATTCTGAAATTCAGAAGGTATC
TGGAAATGTAGAGAAAAAGATCTGTGCGGTTGGCATAACCAAATTACTAACAGAATGTCCCCCAATGATGGACAC
TGAGTATACCAAACCTGTGGACTCCATTATTACAGTCTTTGATTGGTCTTTTTGAGTTACCCGAAGATGATACCAT
TCCTGATGAGGAACATTTTATTGACATAGAAGATACACCAGGATATCAGACTGCCTTCTCACAGTTGGCATTTCG
TGGGAAAAAAGAGCATGATCCTGTAGGTCAAATGGTGAATAACCCCAAATTCACCTGGCACAGTCACTTCACAA
GTTGTCTACCGCCTGTCCAGGAAGGACCTATTTTTGAAGGCATAAAAGCAGTTGAGTTTCTGGAGAATTTTGGGA
TGGTGATTAATGACTTGACTGGCTGCTCTTCCAGAGCTGTGGCAGCTCTCCCGTAGAAGATGGGGTTTGTATTG
GCGCACCAAGATCTCCAACAGCCAGTGTGTGTTTCCCATCTCTTGTAGGTTCCATCAATGGTGAGCACCAGCCTG
AATGCAGAAGCGCTCCAGTATCTCCAAGGGTACCTTCAGGCAGCCAGTGTGACACTGCTTTAAACTGCATTTTTC
TAATGGGCTAAACCCAGATGGTTTTCTAGGAAATCACAGGCTTCTGAGCACAGCTGCATTAAAACAAAGGAAGTT
CTCCTTTTGAACCTGTGCACGAATCCATCTTGTAAGGATATTAAATGTTGCTTTAACCTGAACCTTGAGCAAAAT
TAGTTGGTTTGTGTGATCATAAGTTATGTGGGTGGCTTCTAGTTTGCACTTCAAGGGACAAGTATTAATAGTT
CAGTGTATGGCGTTGGTTTGTGTTGAGCGTTTGCACGGTTTGGATAATCTTAAATTTTGACGGACACTGTGGAGA
CTTXCTGTTACTAAATCCTTTTGTGTTTGAAGCTGTTGCTATTTGTATTTCTCTTGCTTTTATATTTTTTGTCT
GTTTATTTACGCTTTTATTGGAAATGTGAATAAGTAAAGAATTACTTGTGTTACTTGCCAAGCAGTGCACATTTTC
ATAGTTTCAAATCTGTAATCAGCAATAAAAATCCTAAAAATATGTACCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 71

CGGGATGCGGCGCGCCGCGCGTTGAACCTCCTTGGCCTGGGCGAAGCTGTGTGGACCAAGCAAGTCAGGAGTGTG
GCCATGTTTTCTGAGCAGGCTGCCCAGAGGGCCCACACTCTACTGTCCCCACCATCAGCCAACAATGCCACCTTT
GCCCCGGTGCCAGTGGCAACCTACACCAACTCCTCACAACCCTTCCGGCTAGGAGAGCGCAGCTTTAGCCGGCAG
TATGCCACATTTATGCCACCCGCCTCATCCAAATGAGACCCTTCTTGGAGAACCAGGGGCCAGCAGCACTGGGGC
AGTGGAGTGGGAGTGAAGAAGCTGTGTGAACTGCAGCCTGAGGAGAAGTGCTGTGTGGTGGGCACTCTGTTCAAG
GCCATGCCGCTGCAGCCCTCCATCCTGCGGGAGGTGAGCGAGGAGCACAACTGCTCCCCAGCCTCCTCGGAGT
AAATACATACACCCAGATGACGAGCTGGTCTTGAAGATGAACTGCAGCGTATCAAATAAAAGGCACCATTGAC
GTGTCAAAGCTGGTTACGGGGACTGTCCTGGCTGTGTTTGGCTCCGTGAGAGACGACGGGAAGTTTCTGGTGGAG
GACTATTGCTTTGCTGACCTTGCTCCCCAGAAGCCCGCACCCCCACTTGACACAGATAGGTTTGTGCTACTGGTG
TCCGGCCTGGGCCCTGGGTGGCGGTGGAGGCGAGAGCCTGCTGGGACCCAGCTGCTGGTGGATGTGGTGACGGGG
CAGCTTGGGGACGAAGGGGAGCAGTGCAGCGCCGCCCACGTCTCCCGGTTATCCTCGCTGGCAACCTCCTCAGC
CACAGCACCCAGAGCAGGGATTCTATCAATAAGGCCAAATACCTCACCAAGAAAACCCAGGCAGCCAGCGTGGAG
GCTGTAAAGATGCTGGATGAGATCCTCCTGCAGCTGAGCGCCTCAGTGCCCGTGGACGTGATGCCAGGCGAGTTT
GATCCCAACAATTACACGCTCCCCAGCAGCCCTCCACCCCTGCATGTTCCCGCTGGCCACTGCCTACTCCACG
CTCCAGCTGGTCAACCAACCCCTACCAGGCCACCATTGATGGAGTCAGATTTTGGGGACATCAGGACAGAACGTG
AGTGACATTTTCCGATACAGCAGCATGGAGGATCACTTGGAGATCCTGGAGTGGACCCTGCGGGTCCGTACATC
AGCCCCACAGCCCCGGACACTCTAGGTTGTTACCCCTTCTACAAAATGACCCGTTTATCTTCCCAGAGTGCCCG
CATGTCTACTTTTGTGGCAACACCCCCAGCTTTGGCTCCAAAATCATCCGAGGTCCTGAGGACCAGACAGTGCTG
TTGGTGAAGTGTCCCTGACTTCAGTGCCACGCAGACCGCCTGCCTTGTGAACCTGCGCAGCCTGGCCTGCCAGCCC
ATCAGCTTCTCGGGCTTCGGGGCAGAGGACGATGACCTGGGAGGCCTGGGGCTGGGGCCCCTGACTCAAAAAGTG
GTTTTGACCAGAGAGGCCAGATGGAGGCTGTTTATTCCCTGCAGTGTGCGCATTGTAATAAAGCCTGGCACTT
GCTGATGCG

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FIGURE 72

MFSEQAAQRAHTLLSPPSANNATFARVPVATYTNSSQPFRLGERSFSRQYAHYATR LIQMRPFLENRAQQHWGS
GVGVKKLCELQPEEKCCVVGTLFKAMPLQPSILREVSEEHNLLPQPPRSKYIHPDDELVLEDELQRIKLKGTIDV
SKLVTGTVLAVFGSVRDDGKFLVEDYCFADLAPQKPAPPLDTRFVLLVSGGLGLGGGGGESLLGTQLLDVVTGQ
LGDEGEQCSAAHVSRVILAGNLLSHSTQSRDSINKAKYLTKKTQAASVEAVKMLDEILLQLSASVPVDVMPGEFD
PTNYTLFQQPLHPCMFPLATAYSTLQLVTNPYQATIDGVRF LGTSGQNVSDIFRYSSMEDHLEILEWTLRVRHIS
PTAPDTLGCYFFYKTDPFIFPECPHVYFCGNTPSFGSKIIRGPEDQTVLLVTVPDFSATQTACLVNLRSLACQPI
SFSGF GAEDDDLGGGLGP

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FIGURE 74

MADDLDFETGDAGASATFPMQCSALRKNGFVVLKGRPCKIVEMSTSKTGKHGHAKVHLVGIDIFTGKKYEDICPS
THNMDVPNIKRNDQLIGIQDGYLSLLQDSGEVREDLRLPEGDLGKEIEQKYDCGEEILITVLSAMTEEAATAIK
AMAK

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FIGURE 75

AGCGAGTCCTTCTTTTCCTGACTGCAGCTCTTTTCATTTTGCCATCCTTCTCCAGCTCCATGATGGTTCTGCAGG
TTTCTGCGGCCCCCGGACAGTGGCTCTGACGGCGTTACTGATGGTGCTGCTCACATCTGTGGTCCAGGGCAGGG
CCACTCCAGAGAATTACGTGTACCAGGGACGGCAGGAATGCTACGCGTTTAATGGGACACAGCGCTTCCTGGAGA
GATACATCTACAACCGGGAGGAGTACGCGCGCTTCGACAGCGACGTGGGGGAGTTCCGGGCGGTGACGGAGCTGG
GGCGGCCTGCTGCGGAGTACTGGAACAGCCAGAAGGACATCCTGGAGGAGAAGCGGGCAGTGCCGGACAGGGTAT
GCAGACACAACCTACGAGCTGGACGAGGCCGTGACCCCTGCAGCGCCGAGTCCAGCCTAAGGTGAACGTTTCCCCCT
CCAAGAAGGGGCCCCCTGCAGCACCACAACCTGCTTGCTGTCACGTGACAGATTCTACCCAGGCAGCATTCAAG
TCCGATGGTTTCCTGAATGGACAGGAGGAAACAGCTGGGGTTCGTGTCCACCAACCTGATCCGTAATGGAGACTGGA
CCTTCCAGATCCTGGTGATGCTGGAAATGACCCCCAGCAGGGAGACGTCTACATCTGCCAAGTGGAGCACACCA
GCCTGGACAGTCTGTACCGTGGAGTGGAAAGGCACAGTCTGATTCTGCCAGAGTAAGACATTGACGGGAGCTG
GGGGCTTCGTGCTGGGGCTCATCATCTGTGGAGTGGGCATCTTCATGCACAGGAGGAGCAAGAAAGTTCAACGAG
GATCTGCATAAACAGGGTTCCTGACCTCACCGAAAAGACTAATGTGCCTTAGAACAAGCATTTGCTGTGTTTTGT
TAACACCTGGTTCCAGGACAGACCCTCAGCTTCCCAAGAGGATACTGCTGCCAAGAAGTTGCTCTGAAGTCAGTT
TCTATCGTTCTGCTCTTTGATTCAAAGCACTGTTTCTCTCACTGGGCCTCCAACCATGTTCCCTTCTTCTTAGCA
CCACAAATAATCAAAACCCAACATAAGTGTGTTGCTTTCCTTTAAAAATATGCATCAAATCGTCTCTCATTACTTT
TCTCTGAGGGTTTTAGTAAACAGTAGGAGTTAATAAAGAAGTTCATTTTGGTTTACACGTAGGAAAGAAGAGAAG
CATCAAAGTGGAGATATGTTAACTATTGTATAATGTGGCCTGTTATACATGACACTCTTCTGAATTGACTGTATT
TCAGTGAGCTGCCCCCAAATCAAGTTTAGTGCCCTCATCCATTTATGTCTCAGACCGCTATTCTTAACTATTCAA
TGGTGAGCAGACTGCAAATCTGCCTGATAGGACCCATATTCACACAGCACTAATTCAACATATATCTTACTGAGA
GCAIGTTTTATCATTACCATTAAGAAGTTAAATGAACATCAGAATTTAAAATCATAAATATAATCTAATACACTT
T

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FIGURE 76

MMVLQVSAAPRTVALTALLMVLLTSVVQGRATPENYVYQGRQECYAFNGTQRFLERYIYNREEYAREFSDVGEFR
AVTELGRPAAEYWNSQKDILEEKRAVPDRVCRHNYELDEAVTLQRRVQPKVNVSPSKKGPLQHHNLLVCHVTDFY
PGSIQVRWFLNGQEETAGVVSTNLIRNGDWFQILVMLEMPQQGDVYICQVEHTSLDSPVTVEWKAQSDSAQSK
TLTGAGGFVLGLIICGVGIFMHRRSKKVQRGSA

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FIGURE 77

GGCACGAGGGGGCGGCCGGTGAGGGGGAAGCAAGTCTGGTCTCTGTGATTGAAGAAGTCGGCTCTGGGCTCCAGTG
CGGGAATCACACACATACCTCAGAAATGCCGGGTCTAAGTTGTAGATTTTATCAACACAAATTTCTGAGGTGGAA
GATGTAGTGATGGTGAATGTCAGATCCATTGCTGAAATGGGGGCTTATGTCAGCTTGCTGGAATACAACAACATT
GAAGGCATGATTCTTCTTAGTGAATTATCCAGAAGGCGTATCCGTTCTATCAACAACTCATCCGAATTGGCAGG
AATGAGTGTGTGGTTGTCTATTAGGGTGGACAAAGAAAAAGGATATATTGATTTGTCAAAAAGAAGAGTTTCTCCA
GAGGAAGCAATCAAATGTGAAGACAAATTCACAAAATCCAAAAGTGTATATAGCATTCTTCGTATGTTGCTGAG
GTGTTAGAATACACCAAGGATGAGCAGCTGGAAAGCCTATTCCAGAGGACTGCCTGGGTCTTTGATGACAAGTAC
AAGAGACCTGGATATGGTGCCTATGATGCATTTAAGCATGCAGTCTCAGACCCATCTATTTTGGATAGTTTAGAT
TTGAATGAAGATGAACGGGAAGTACTCATTAATAATATTAATAGGCGCTTGACCCACAGGCTGTCAAAAATTCGA
GCAGATATTGAAGTGGCTTGTATGGTTATGAAGGCATTGATGCTGTAAAAGAAGCCCTAAGAGCAGGTTTGAAT
TGTTCTACAGAAAACATGCCCATTAAGATTAATCTAATAGCTCCTCCTCGGTATGTAATGACTACGACAACCCTG
GAGAGAACAGAAGGCCTTTCTGTCTCAGTCAAGCTATGGCTGTTATCAAAGAGAAGATTGAGGAAAAGAGGGGT
GTGTTCAATGTTCAAATGGAGCCCAAAGTGGTCACAGATACAGATGAGACTGAACCTGCGAGGCAGATGGAGAGG
CTTGAAAGAGAAAATGCCGAAGTGGATGGAGATGATGATGCAGAAGAAATGGAAGCCAAAGCTGAAGATTAACTT
TGTGGGAAACAGAGTCCAATTTAAGGAACACAGAGCAGCGCTTCCTGGCTGTAAATCCTAGACTTGAAAGTTTTT
CAGTATTGAAAACCTTCAAAGCTGAATATTTTTTATTTCTAAGTATTTAAATGTTCTAACAGATCAGAACATGAAA
TGCCCTCCTAAATGTCAGCTGTTGTACACAGTAGCTCCAACACTTTGAGCATTTTTTAAGGGAGTGGCCTCATT
CACTAGAGACAAATCTTTAAGAATAGTTCTAAAATTTGGGCTTGTGATTTCCATTTCTGATGCTCTCCAGATTGGCA
CCCCTTTCTAGTTCAATGCCTCACGAGATTTGCCAGGGGCATCCAAGGCAACAATCCCAATCTTTCTATATAAA
ATGTATTCAAGCAAACATCAAATAAATTTCTGGGATATTTAACTATAGGCTTCTTCCTTCTGTACCAGTTAAA
AGCATTTTAACTAAGACCCTAATCTTTTATCTTTATTTTAGTCTTGATGTGGAAGTGTAGGAGCAGGTGAAT
AAAGGATCTCTATAACAGATCCTTTCAAAGAAGAGTTTTAGAGAAAATAAATTTAACTTTAACCACAGTGAAAG
TTGACCTTAGCGGGACAAAGCCTTAAATGCATTGAAAGAATTAGATCGTTCTGTGCCTTTTATCTATTTGAG
ATTGATGACAACCTGTGTGAGAGAATTTATCACACCACGTCCTTATTGGAATAATAAGCTACTTGCCTTGAGTTT
ATAATTCAGGGTGGTAAAGTATGTTTTTAAATTTTAAAAAGCAGCTGCATTTTTTATTTAGTTGGAATATCACC
AATTTTTTATTTTTATTGCTATTAAAATATCCACTAGATGCCACCTAGAGCTCCAGTTCTTTATAACAAAACAGG
GATCTGTTTGAACACTTACTGTTGTTTTTTTTTTTTTACATGTTTCCATCATTCTGTCTTTAAGAACTAATTG
TACATAATAAGTTTCATAGGTAACACATTATATCTCTTATGATACTTGAGGTACCAGTTGTATTTAATTTTATT
CATTATCCCTAGATAGCTATTAAGATACTTAGATTAGACCTAACCACCATAGTCAATCCAAGACTAGACTACTC
AATATTAAAGGGTCTGGAAAATAGAAGAGTGTGTTGGGCAGGTAGTTTGTACCATTTATGAAGGTTTGTTCCTT
GTTAAATTTAGCAGCCTGTACTAGCTTTTGAAATCCAGAAGTTTTAACTTCCAGTGGCTGGTTTTCTGAGAGAGTG
CCATGATTGCTAGCCAGCATTCCATATTGGGAATATGTAGAGGAGAACCCTGGATGTACTTAAGAGTGGCATATAA
TTTTCACTTCTGTCTGTTGAGGCAAAAAAAAAACAAGTTTAGAAAGCTGGCAACATGAAGAATGCATTCAAAATA
TAACAGGTGCTTCTTTGTTGTACGCAGAGGAATTTTTTCTTTTGATTTTGTACTGAAATTTGTTATACTTCAA
AAGCCATAACTTGAAAAATACTGGTGGCGTCGATGGTGAGTGATTTTTATCCACGTGGGCCTTTTGCTCAGTTC
CATGGCAATTTTGTAATTGACCCTAGCCAGAGAATAGATCAGTATTTCACTGATACCACGAGGAAAAGAACAAA
CAAACTTAAAAGTATTCATACACCTTGCTAACCTAAAAGACAGCAGGGACAAGATACATATGAGGACAAGGTAT
ACACCCAGTTCTGAATAACTTGAAGAACAGGCTTGCCAAAGAAGTAAGTTTATCCAAATCTTGAATTTCTGCCAG
GCATGGTAGCTCATGCCTGTAACCCTGGCACTTAAGGGGCCAAGGCAGGAGGATCACTTGAGGCCAGTGAGCTGT
GATCACTCCAGTGCCTCGAGCCTGGGTGACAGGGCAAGACCCTGTCTCAAAAAAAAAAAAAAAAAA

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FIGURE 78

MPGLSCRFYQHKFPEVEDVVMVNVRSIAEMGAYVSLLEYNNIEGMILLSELSRRRIRSINKLIRIGRNECVVIR
VDKEKGYIDLSKRRVSPEEAIKCEDKFTKSKTVYSILRHVAEVLEYTKDEQLESLEFQRTAWVFDDKYKRPGYGAY
DAFKHAVSDPSILDSLDLNEDEREVLINNINRRRLTPQAVKIRADIEVACYGYEGIDAVKEALRAGLNCSTENMPI
KINLIAPPRYVMTTTLERTEGLSVLSQAMAVIKEKIEEKRGVFNVMPEPKVVTDDETALARQMERLERENAEV
DGDDDAEEMEAKAED

FIGURE 79

[illegible]

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FIGURE 80

MERIPSAQPPFACLPKAPGLEHGDLPGMYPAHMYQVYKSRRGIKRSEDSKETYKLPHRLIEKKRRDRINECIAQL
KDLLPEHLKLTTLGHLEKAVVLELTTLKHVKALTNLIDQQQKI IALQSGLQAGELSGRNVETGQEMFCSGFQTCA
REVLQYLAKHENTRDLKSSQLVTHLHRVVSELLQGGTSRKPSDPAPKVMDFKEKPSSPAKGSEGPKNVCVPVIQR
TFAHSSGEQSGSDTDTDSGYGGESEKGDLRSEQPCFKSDHGRRFTMGERIGAIKQESEEPPTKKNRMQLSDDEGH
FTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKCWYPTSVPVLYPGLNASAAALSSFMNPDKISAPL
LMPQRLPSPLPAHPSVDSSVLLQALKPIPLNLETKD

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FIGURE 81

[illegible]

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FIGURE 82

MERIPSAQPPFACLPKAPGLEHGDLPGMYP AHMYQVYKSRRGIKRSEDSKETYKLPHRLIEKKRRDRINECIAQL
KDLLPEHLKLTTLGHLEKAVVLELTTLKHVKALTNLIDQQQKI IALQSGLQAGELSGRNVETGOEMFCSGFQTCA
REVLQYLAKHENTRDLKSSQLVTHLHRVVSELLQGGTSRKPSDPAPKVMDFKEKPSSPAKGSEGP GKNCVPFVIQR
TFAHSSGEQSGSDTDTDSGYGGESEKGD LRSEQPCFKSDHGRRFTMGERIGA IKQESEEPPTKKNRMQLS DDEGH
FTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKCWYPTSVPVLYPGLNASAAALSSFMNPDKISAPL
LMPQRLPSPLPAHPSVDSSVLLQALKPI PPLNLETKD

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FIGURE 83A

GTCTTTTACGCGTGTCTTCGTGTTGGTGCGCTTTTCACTGGTCATAAAGTGCTGCTCACGGCCGTGAACTGCTA
CAGCGTGAAGGCCGCCACCCGGGTCCAGGATGCTTTTGCCGCCGCCAAGCTCCTGGCCCTGGCCCTGATCATCCT
GCTGGGCTTCGTCCAGATCGGGAAGGGTGATGTGTCCAATCTAGATCCCAAGTTCTCATTTGAAGGCACCAAAC
GGATGTGGGGAACATTGTGCTGGCATTATACAGCGGCCTCTTTGCCTATGGAGGATGGAATTACTTGAATTTCGT
CACAGAGGAAATGATCAACCCCTACAGAAACCTGCCCTGGCCATCATCATCTCCCTGCCCATCGTGACGCTGGT
GTACGTGCTGACCAACCTGGCCTACTTCACCACCCTGTCCACCAGCAGATGCTGTCTGCTCCGAGGCCGTGGCCGT
GGACTTCGGGAACATATCACCTGGGCGTCATGTCTGGATCATCCCGTCTTCGTGGGCTGTCTGCTTTGGCTC
CGTCAATGGGTCCCTGTTACATCCTCCAGGCTCTTCTTCGTGGGGTCCCGGAAGGCCACCTGCCCTCCATCCT
CTCCATGATCCACCCACAGCTCCTCACCCCGTGCCGTCCCTCGTGTTACGTGTGTGATGACGCTGCTCTACGC
CTTCTCCAAGGACATCTTCTCCGTATCAACTTCTTCAGCTTCTTCAACTGGCTCTGCGTGGCCCTGGCCATCAT
CGGCATGATCTGGCTGCGCCACAGAAAGCCTGAGCTTGAGCGGCCCATCAAGGTGAACCTGGCCCTGCCTGTGTT
CTTCATCCTGGCCTGCCTCTTCTGATCGCCGTCTCCTTCTGGAAGACACCCGTGGAGTGTGGCATCGGCTTCAC
CATCATCCTCAGCGGGCTGCCGTCTACTTCTTCGGGGTCTGGTGGAAAAACAAGCCCAAGTGCTCCTCCAGGG
CATCTTCTCCAGACCGTCTGTGTGAGAAGCTCATGCAGGTGGTCCCCAGGAGACATAGCCAGGAGGCCGAGT
GGCTGCCGGAGGAGCATGCGCAGAGGCCAGTTAAAGTAGATCACCTCCTCGAACCCTCCGGTTCCCCGCAACC
CACAGCTCAGCTGCCATCCAGTCTCGCCGTCCCTCCCAGGTGGGCGAGTGGAGGCTGCTGTGAAAACCTCTGG
TACGAATCTCATCCCTCAACTGAGGGCCAGGGACCCAGGTGTGCTGTGCTCCTGCCAGGAGCAGCTTTTGGTC
TCCTTGGGCCCCTTTTTCCCTTCCCTCCTTTGTTTACTTATATATATATTTTTTTTTTAACTTAAATTTGGGTCAA
CTTGACACCCTAAGATGATTTTTTAAGGAGCTGGGGGAAGGCAGGAGCCTTCCTTTCTCCTGCCCAAGGGCCC
AGACCTTGGGCAAACAGAGCTACTGAGACTTGGAACCTCATTGCTACCACAGACTTGCACTGAAGCCAGACAGCT
GCCCAGACACATGGGCTTGTGACATTCTGTGAAAACCAACCCTGTGGGCTTATGTCTCTGCCTTAGGGTTTGAGA
GTGGAACTCAGCCGTAGGGTGGCACTGGGAGGGGGTGGGGGATCTGGGCAAGGTGGGTGATTCTCCAGGAGG
TGCTTGAGGCCCCGATGGACTCCTGACCATAATCCTAGCCCCGAGACACCATCCTGAGCCAGGGAACAGCCCCAG
GGTTGGGGGTGCGGCATCTCCCTAGCTCACCAGGCTTGGCTCTGGGCGAGTGTGGCCTCTTGGCTATTTCTG
TTCCAGTTTGGAGGCTGAGTTCTGGTTTATGACAGACAAAGCCCTGTCTTCAGTCTTCTAGAAACAGAGACAAG
AAAGGCAGACACACCGCGGCCAGGCACCCATGTGGGCGCCACCCTGGGCTCCACACAGCAGTGTCCCTGCCCT
AGAGGTCGAGCTACCCTCAGCCTCCAATGCATTGGCCTCTGTACCGCCCGGACAGCCCTTCTGGCCGGTGTGG
GTTCCCACTCCCGGCCTAGGCACCTCCCGCTCTCCCTGTACGCTCATGTCTGTCTGGTCTGATGCCCGTT
GTCTAGGAGACAGAGCCAAGCACTGCTCACGTCTCTGCCGCTGCGTTTGGAGGCCCTGGGCTCTACCCAGTC
CCCACCCGCTGCAGAGAGGGAAGTAGGGCACCCCTTGTCTGTGTTTCCCGTGAATTTTTTCTGCTATGGGAG
GCAGCCGAGGCTTGCCAATGCGGCCACTTTCTGAGCTGTGCTGCTCCATGGCAGCAGCCAAGGACCCCCA
GAACAAGAAGACCCCCCGCAGGATCCCTCCTGAGCTCGGGGGGCTCTGCCTTCTCAGGCCCGGGCTTCCCTTC
TCCCCAGCCAGAGGTGGAGCCAAGTGGTCCAGCGTCACTCCAGTGCTCAGCTGTGGCTGGAGGAGCTGGCCTGTG
GCACAGCCCTGAGTGTCCCAAGCCGGGAGCCAACGAAGCCGGACACGGCTTCACTGACCAGCGGCTGCTCAAGCC
GCAAGCTCTCAGCAAGTGGCCAGTGGAGCTGCGGCCCCACCTGGGCACCGGGACCCCTCACCATCCAGTGGG
CCCGGAGAAACCTGATGAACAGTTTGGGACTCAGGACCAGATGTCCGTCTCTCTTGCTTGAGGAATGAAGACCT
TTATTCACCCCTGCCCGTTGCTTCCCGCTGCACATGGACAGACTTCACAGCGTCTGCTCATAGGACCTGCATCC
TTCTTGGGGACGAATTCACCTCGTCCAAGGGACAGCCACCGTCTGGAGGCCGAGGACCACCAGCAGGCAGGTGG
ACTGACTGTGTTGGGCAAGACCTCTTCCCTCTGGGCTGTCTCTTGGCTGCAAATAAGGACAGCAGCTGGTGCC
CCACCTGCCTGGTGCATTGCTGTGTGAATCCAGGAGGCAGTGACATCGTAGGCAGCCACGGCCCCAGGTCCAGG
AGAAGTGCTCCCTGGAGGCACGGACCACTGCTTCCCACTGGGGCCGGCGGGGCCACGCACGACGTACAGCTCTT
ACCTTCCCGCTCGGCTAGGGGTCTCGGGATGCCGTTCTGTTCCAACCTCCTGTTCTGGGAGGTGGACATGCCT
CAAGGATACAGGGAGCCGGCGGCCTCTCGACGGCACGCACTTCTGTTGGCTGCTGCGGCTGTGGGCGAGCATGG
GGGCTGCCAGCGTCTGTTGTGAAAGTAGCTGCTAGTGAAATGGCTGGGGCCGTGGGGTCCGTCTTCACTGTC
GCAGGTCTCTTCTGGGCGTCTGAGCTGGGGTGGGAGCTCCTCCGAGAAGGTTGGTGGGGGGTCCAGTCTGTGAT
CCTTGGTGCTGTGTGCCCCACTCCAGCCTGGGGACCCCACTTCAAGGAGTGGGGCCGTGTCGCGGGTGTGAC
TGAGGCGCTGCTTCCCCCTCCCCCTCCTGCTGTGCTGGAATTCACAGGGACAGGGCCACCGCAGGGGACTGTCT
CAGAAGACTTGATTTTTCCGTCCCTTTTTCTCCACACTCCACTGACAAACGTCCCCAGCGGTTTCCACTTGTGGG

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FIGURE 83B

CTTCAGGTGTTTTCAAGCACAACCCACCACAACAAGCAAGTGCATTTTCAGTCGTTGTGCTTTTTTGTGTTTGTGC
TAACGTCTTACTAATTTAAAGATGCTGTCCGCACCATGTTTATTTATTTCCAGTGGTCATGCTCAGCCTTGCTGC
TCTGCGTGGCGCAGGTGCCATGCCTGCTCCCTGTCTGTGTCCCAGCCACGCAGGGCCATCCACTGTGACGTCGGC
CGACCAGGCTGGACACCCTCTGCCGAGTAATGACGTGTGTGGCTGGGACCTTCTTTATTCTGTGTTAATGGCTAA
CCTGTTACACTGGGCTGGGTTGGGTAGGGTGTTCGGCTTTTTTGTGGGGTTTTTATTTTTAAAGAAACACTCAA
TCATCCTAG

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FIGURE 84

MINPYRNLPLAIIISLPIVTLVYVLTNLAYFTTLSTEQMLSSSEAVAVDFGNYHLGVMSWIIIPVFVGLSCFGSVNG
SLFTSSRLFFVGSREGHLPSILSMIHPQLLTPVPSLVFTCVMTLLYAFSKDIFSVINFFSFFNWLCVALAIIGMI
WLRHRKPELERPIKVNALPVFFILACLFLIAVSFWKTPVECGIGFTIILSGLPVYFFGVWWKNKPKWLLQGIFS
TTVLCQKLMQVVPQET

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FIGURE 85

AGGTCTCAGCCGGTCGTCGCGACGTTGCCCCGCTCGCTCTGAGGCTCCTGAAGCCGAACTAGCTAGACTTTCCCT
CCTTCCCGCCTGCCTGTAGCGGCGTTGTTGCCACTCCGCCACCATGTTTCGAGGCGCGCCTGGTCCAGGGCTCCAT
CCTCAAGAAGGTGTTGGAGGCACTCAAGGACCTCATCAACGAGGCCTGCTGGGATATTAGCTCCAGCGGTGTAAA
CCTGCAGAGCATGGACTCGTCCCACGTCTCTTTGGTGCAGCTCACCCCTGCGGTCTGAGGGCTTCGACACCTACCG
CTGCGACCGCAACCTGGCCATGGGCGTGAACCTCACCAGTATGTCCAAAATACTAAAATGCGCCGGCAATGAAGA
TATCATTACACTAAGGGCCGAAGATAACGCGGATACCTTGGCGCTAGTATTTGAAGCACCAAACCAGGAGAAAAGT
TTCAGACTATGAAATGAAGTTGATGGATTTAGATGTTGAACAACCTTGAATTCCAGAACAGGAGTACAGCTGTGT
AGTAAAGATGCCTTCTGGTGAATTTGCACGTATATGCCGAGATCTCAGCCATATTGGAGATGCTGTTGTAATTC
CTGTGCAAAAGACGGAGTGAAATTTTCTGCAAGTGGAGAACTTGGAAATGGAAACATTAAATTGTCACAGACAAG
TAATGTCGATAAAGAGGAGGAAGCTGTTACCATAGAGATGAATGAACCAGTTCAACTAACTTTGCACTGAGGTA
CCTGAACTTCTTTACAAAAGCCACTCCACTCTCTTCAACGGTGACACTCAGTATGTCTGCAGATGTACCCCTTGT
TCTAGAGTATAAAATTGCGGATATGGGACACTTAAAATACTACTTGGCTCCCAAGATCGAGGATGAAGAAGGATC
TTAGGCATTCTTAAATTC AAGAAAATAAACTAAGCTCTTTGAGAACTGCTTCTAAGATGCCAGCATATACTGA
AGTCTTTTCTGTACCAAATTTGTACCTCTAAGTACATATGTAGATATTGTTTTCTGTAAATAACCTATTTTTTT
TCTCTATTCTCTCCAATTTGTTTAAAGAATAAAGTCCAAAGTCTGATCTGGTCTAGTTAACCTAGAAGTATTTTT
GTCTCTTAGAAATACTTGTGATTTTTATAATACAAAAGGGTCTTGACTCTAAATGCAGTTTTAAGAAGTGTTTTT
GAATTTAAATAAAGTTACTTGAATTTCAAAC

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FIGURE 86

MFEARLVQGSILKKVLEALKDLINEACWDISSSGVNLQSMDSHVSLVQLTLRSEGFDTYRCDRNLAMGVNLISM
SKILKCAGNEDIITLRAEDNADTLALVFEAPNQEKVSDYEMKMDLDVEQLGIPEQEYSCVVKMPSGEFARICRD
LSHIGDAVVISCAKDGVKFSASGELGNGNIKLSQTSNVDKEEEAVTIEMNEPVQLTFALRYLNFFTKATPLSSTV
TLSMSADVPLVVEYKIADMGHLKYYLAPKIEDEEGS

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FIGURE 87

TAGCTAGGCAGGAAGTCGGCGCGGGCGGGCGCGGACAGTATCTGTGGGTACCCGGAGCACGGAGATCTCGCCGGCT
TTACGTTACCTCGGTGTCTGCAGCACCTCCGCTTCTCTCCTAGGCGACGAGACCCAGTGGCTAGAAGTTCAC
CATGTCTATTCTCAAGATCCATGCCAGGGAGATCTTTGACTCTCGCGGGAATCCCACTGTTGAGGTTGATCTCTT
CACCTCAAAAGGTCTCTTCAGAGCTGCTGTGCCCAGTGGTGCTTCAACTGGTATCTATGAGGCCCTAGAGCTCCG
GGACAATGATAAGACTCGCTATATGGGGAAGGGTGTCTCAAAGGCTGTTGAGCACATCAATAAAACTATTGCGCC
TGCCCTGGTTAGCAAGAACTGAACGTCACAGAACAAGAGAAGATTGACAACTGATGATCGAGATGGATGGAAC
AGAAAATAAATCTAAGTTTGGTGCGAACGCCATTCTGGGGGTGTCCCTTGCCGTCTGCAAAGCTGGTGCCGTTGA
GAAGGGGTCCCCCTGTACCGCCACATCGCTGACTTGGCTGGCAACTCTGAAGTCATCCTGCCAGTCCCGGCGTT
CAATGTCATCAATGGCGGTTCTCATGCTGGCAACAAGCTGGCCATGCAGGAGTTCATGATCCTCCAGTCGGTG
AGCAAACCTCAGGGAAGCCATGCGCATTGGAGCAGAGGTTTACCACAACCTGAAGAATGTCATCAAGGAGAAATA
TGGGAAAGATGCCACCAATGTGGGGGATGAAGGCGGGTTTGCTCCCAACATCCTGGAGAATAAAGAAGGCCTGGA
GCTGCTGAAGACTGCTATTGGGAAAGCTGGCTACACTGATAAGGTGGTCATCGGCATGGACGTAGCGGCCTCCGA
GTTCTTCAGGTCTGGGAAGTATGACCTGGACTTCAAGTCTCCCGATGACCCAGCAGGTACATCTCGCCTGACCA
GCTGGCTGACCTGTACAAGTCCTTCATCAAGGACTACCCAGTGGTGTCTATCGAAGATCCCTTTGACCAGGATGA
CTGGGGAGCTTGGCAGAAGTTCACAGCCAGTGCAGGAATCCAGGTAGTGGGGGATGATCTCACAGTGACCAACCC
AAAGAGGATCGCCAAGGCCGTGAACGAGAAGTCTTGCAACTGCCTCCTGCTCAAAGTCAACCAGATTGGCTCCGT
GACCGAGTCTCTTCAGGCGTGCAAGCTGGCCCAGGCCAATGGTTGGGGCGTCATGGTGTCTCATCGTTTCGGGGGA
GACTGAAGATACCTTCATCGCTGACCTGGTTGTGGGGCTGTGCACTGGGCAGATCAAGACTGGTGCCCCCTTGCCG
ATCTGAGCGCTTGGCCAAGTACAACCAGCTCCTCAGAATTGAAGAGGAGCTGGGCAGCAAGGCTAAGTTTGCCGG
CAGGAACTTCAGAAACCCCTTGGCCAAGTAAGCTGTGGGCAGGCAAGCCCTTCGGTCACCTGTTGGCTACACAGA
CCCCCTCCCCTCGTGTGCTAGCTCAGGCAGCTCGAGGCCCCCGACCAACACTTGACGGGTCCCTGCTAGTTAGCGCC
CCACCGCCGTGGAGTTCGTACCGCTTCCTTAGAACTTCTACAGAAGCCAAGCTCCCTGGAGCCCTGTTGGCAGCT
CTAGCTTTGCAGTCGTGTAATTGGCCCAAGTCATTGTTTTTCTCGCCTCACTTTCCACCAAGTGTCTAGAGTCAT
GTGAGCCTCGTGTCTCTCCGGGGTGGCCACAGGCTAGATCCCCGGTGGTTTTGTGCTCAAATAAAAAGCCTCA
GTGACCCATGAG

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FIGURE 88

MSILKIHAREIFDSRGNPTVEVDLFTSKGLFRAAVPSGASTGIYELELRDNDKTRYMGKGVSKAVEHINKTIAP
ALVSKKLVTEQEKIDKLMIEDGTENKSKFGANAILGVSLAVCKAGAVEKGVPLYRHIADLAGNSEVILPVPAP
NVIINGGSHAGNKLAMQEFMILPVGAANFREAMRIGAEVYHNLKNVIKEKYGKDATNVGDEGGFAPNILENKEGLE
LLKTAIGKAGYTDKVVIGMDVAASEFFRSGKYDLDFKSPDDPSRYISPDQLADLYKSFIKDYPVVSIEDPFDQDD
WGAWQKFTASAGIQVVGDDLTVTNPKRIAKAVNEKSCNCLLLKVNQIGSVTESLQACKLAQANGWGMVSHRSGE
TEDTFIADLVVGLCTGQIKTGAPCRSERLAKYNQLLRIEEEELGSKAKFAGRNFRNPLAK

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FIGURE 89

GGCTGAGGCAGTGGCTCCTTGACAGCAGCTGCACGCGCCGTGGCTCCGGATCTTCTTCGTCTTTGCAGCGTAGC
CCGAGTCGGTCAGCGCCAGAGGACCTCAGCAGCCATGTCGAAGCCCCATAGTGAAGCCGGGACTGCCTTCATTCA
GACCCAGCAGCTGCACGCAGCCATGGCTGACACATTCTGGAGCACATGTGCCGCTGGACATTGATTCACCACC
CATCACAGCCCCGGAACACTGGCATCATCTGTACCATTGGCCCAGCTTCCCGATCAGTGGAGACGTTGAAGGAGAT
GATTAAGTCTGGAATGAATGTGGCTCGTCTGAACCTTCTCTCATGGAACCTCATGAGTACCATGCGGAGACCATCAA
GAATGTGCGCACAGCCACGGAAGCTTTGCTTCTGACCCCATCCTCTACCGGCCCGTTGCTGTGGCTCTAGACAC
TAAAGGACCTGAGATCCGAACCTGGGCTCATCAAGGGCAGCGGCACTGCAGAGGTGGAGCTGAAGAAGGGAGCCAC
TCTCAAAATCACGCTGGATAACGCCTACATGGAAGGTGTGACGAGAATCCTGTGGCTGGACTACAAGAACAT
CTGCAAGGTGGTGGAGGTGGGACAGCAAGATCTACGTGGATGATGGGCTTATTTCTCTCCAGGTGAAGCAGAAAGG
TGCCGACTTCCTGGTGACGGAGGTGGAAGGTGGTGGCTCCTTGGGCAGCAAGAAGGGTGTGAACCTTCCTGGGGC
TGCTGTGGACTTGCTGTGTGTCGGAGAAGGACATCCAGGATCTGAAGTTTGGGGTCGAGCAGGATGTTGATAT
GGTGTTCGCTCATTATCCGCAAGGCATCTGATGTCCATGAAGTTAGGAAGGTCTGGGAGAGAAGGGAAAGAA
CATCAAGATTATCAGCAAAATCGAGAATCATGAGGGGGTTCGGAGGTTTGATGAAATCCTGGAGGCCAGTGATGG
GATCATGGTGGCTCGTGGTGATCTAGGCATTGAGATTCTGCAGAGAAGGTCTTCCTTGCTCAGAAGATGATGAT
TGGACGGTGCAACCGAGCTGGGAAGCCTGTCTGTGCTACTCAGATGCTGGAGAGCATGATCAAGAAGCCCCG
CCCCACTCGGGCTGAAGGCAGTGATGTGGCCAATGCAGTCTGGATGGAGCCGACTGCATCATGCTGTCTGGAGA
AACAGCCAAAGGGGACTATCCTCTGGAGGCTGTGCGCATGCAGAACCTGATTGCCCGTGAGGCAGAGGCTGCCAT
CTACCACTTGCAATTATTTGAGGAATCCGCCGCTGGCGCCCATTACCAGCGACCCACAGAAGCCACCGCCGT
GGGTGCCGTGGAGGCCTCCTTCAAGTGCTGCAGTGGGGCCATAATCGTCCTACCAAGTCTGGCAGGTCTGCTCA
CCAGGTGGCCAGATACCGCCACGTGCCCCCATCATTGCTGTGACCCGGAATCCCAGACAGCTCGTCAGGCCCA
CCTGTACCGTGGCATCTTCCCTGTGCTGTGCAAGGACCCAGTCCAGGAGGCCTGGGCTGAGGACGTGGACCTCCG
GGTGAACCTTTGCCATGAATGTTGGCAAGGCCCCAGGCTTCTTCAAGAAGGGAGATGTGGTCATTGTGCTGACCGG
ATGGCGCCCTGGCTCCGGCTTACCAACACCATGCGTGTGTTCTGTGCTGATGGACCCAGAGCCCCCTCCT
CCAGCCCCGTGCCACCCCCTTCCCCAGCCCATCCATTAGGCCAGCAACGCTTGTAGAACTCACTCTGGGCTGT
AACGTGGCACTGGTAGGTTGGGACACCAGGGAAGAAGATCAACGCCTCACTGAAACATGGCTGTGTTTGCAGCCT
GCTCTAGTGGGACAGCCCAGAGCCTGGCTGCCCCATCATGTGGCCCCACCAATCAAGGGAAGAAGGAGGAATGC
TGGACTGGAGGCCCTGGAGCCAGATGGCAAGAGGGTGACAGCTTCCTTTCTGTGTGTAATCTGTCCAGTTCTT
TTAGAAAAATGGATGCCAGAGGACTCCCAACCCTGGCTTGGGGTCAAGAAACAGCCAGCAAGAGTTAGGGGCC
TTAGGGCACTGGGCTGTTGTTCCATTGAAGCCGACTCTGGCCCTGGCCCTTACTTGCTTCTCTAGCTCTCTAGGC
CTCTCCAGTTTGACCTGTCCCCACCCTCCACTCAGCTGTCTGCAGCAAACACTCCACCCTCCACCTTCCATTT
TCCCCACTACTGCAGCACCTCCAGGCCTGTTGCCGC

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FIGURE 90

MSKPHSEAGTAFIQTQQLHAAMADTFLEHMCRLDIDSPITARNTGIICTIGPASRSVETLKEMIKSGMNVARLN
FSHGTHEYHAETIKNVRTATESFASDPILYRPVAVALDTKGPEIRTGLIKSGTAEVELKKGATLKITLDNAYME
KCDENILWLDYKNICKVVEVGSKIYVDDGLISLQVKQKGADFLVTEVENGGSLGSKKGVNLPGAAVDLPVASEKD
IQDLKFGVEQDVDMVFASFIRKASDVHEVRKVLGEKGKNIKIISKIENHEGVRRFDEILEASDGIMVARGDLGIE
IPAEEKVFLAQMMIGRCNRAGKPVICATQMLESMIKKPRPTRAEGSDVANAVLDGADCIMLSGETAKGDYPLEAV
RMQNLIAREAEAAIYHLQLFEELRRLAPITSDPTEATAVGAVEASFKCCSGAIIVLTKSGRSAHQVARYRPRAPI
IAVTRNPQTARQAHLYRGIFPVLCKDPVQEAWAEDVDLRVNFAMNVGKARGFFKKGDVVIVLTGWRPGSGFTNTM
RVVPVP

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FIGURE 91

CCGAGGCCAAGTCCCGGGCGCTAGCCACCTCCCACCCGCCTCTTGGCTCCTCTCCTCTAGGCCGTCGCTTTCGG
GTTCTCTCATCGCTTCGTCTGTCGTTTCGCCAATGTTTGAGGAGAAGGCCAGCAGTCCTTCAGGGAAGATGGGAGGCGAG
GAGAAGCCGATTGGTGTGCTGGTGAAGAGAAGCAAAAGGAAGGAGGCAAAAAGAAGAACAAGAAGGATCTGGAGAT
GGAGGTCGAGCTGAGTTGAATCCTTGGCCTGAATATATTTACACACGTCTTGAGATGTATAATATACTAAAAGCA
GAACATGATTCCATTCTGGCAGAAAAGGCAGAAAAAGATAGCAAGCCAATTAAAGTCACTTTGCCTGATGGTAAA
CAGGTTGATGCGGAATCTTGGAAAACACACCATATCAAATTGCCTGTGGAATTAGTCAAGGCCTGGCCGACAAC
ACCGTTATTGCTAAAGTAAATAATGTTGTGTGGGACCTGGACCGCCCTCTGGAAGAAGATTGTACCTTGAGCTT
CTCAAGTTTGAGGATGAGGAAGCTCAGGCAGTGTATTGGCACTCTAGTGCTCACATAATGGGTGAAGGCATGGAA
AGAGTCTATGGTGGATGTTTATGCTACGGTCCGCCAATAGAAAAATGGATTCTATTATGACATGTACCTCGAAGAA
GGGGGTGTGTCTAGCAATGATTTCTTCTCTTGGAGGCTTTGTGTAAAGAAAATCATTAAAGAAAAACAAGCTTTT
GAAAGACTGGAAGTTAAGAAAGAACTTTACTGGCAATGTTTAAGTACAACAAGTTCAAATGCCGGATATTGAAT
GAAAGGTGAATACTCCAACACACAGTCTATAGATGTGGCCCTTTGATAGATCTCTGCCGGGGTCTCATGTT
AGACACACGGGCAAAATTAAGGCTTTAAAAATACACAAAAATTCCTCCACGTACTGGGAAGGCAAAGCAGATATG
GAGACTCTCCAGAGAATTTATGGCATTTCATTCCAGATCCTAAAATGTTGAAAGAGTGGGAGAAGTTCCAAGAG
GAAGCTAAAAACCGAGATCATAGGAAAATTGGCAGGGACCAAGAACTATATTTCTTTTCATGAACCTCAGCCCTGGA
AGTTGCTTTTTTCTGCCAAAAGGAGTCTATATTTATAATGCACCTATTGAATTCATTAGGAGCGAATATAGGAAA
AGAGGATTCCAGGAGGTAGTCACCCCAACATCTTCAACAGCCGACTCTGGATGACCTCGGGCCACTGGCAGCAC
TACAGCGAGAACATGTTCTCCTTTGAGGTGGAGAAGGAGCTGTTGCCCTGAAACCCATGAACCTGCCCAGGACAC
TCCCTTATGTTTGATCATCGGCCAAGGTCTTGGCGAGAAGTGCCTCTGCGGCTAGCTGATTTTGGGGGTCTTCAT
AGGAACGAGCTGTCTGGAGCACTCACAGGACTCACCCGGGTACGAAGATTCCAACAGGATGATGCTCACATATTC
TGTGCCATGGAGCAGATTGAAGATGAAATAAAAGGTTGTTTGGATTTTCTACGTACGGTATATAGCGTATTTGGA
TTTTCTTTTAACTAAACCTTTCTACTCGCCCCGAAAAATTCCTTGGAGATATCGAAGTATGGGATCAAGCTGAG
AAACAACCTGAAAACAGTCTGAATGAATTTGGTGAAAAGTGGGAGTTAACTCTGGAGATGGAGCTTTCTATGGC
CCAAAGATTGACATACAGATTAAAGATGCGATTGGGCGGTACCACCAGTGTGCAACCATCCAGCTGGATTTCCAG
TTGCCCATCAGATTTAATCTTACTTATGTAAGCCATGATGGTGGAGATAAGAAAAGGCCAGTGATTGTTTCATCGA
GCCATCTTGGGATCAGTGGAAGAATGATTGCTATCCTCACAGAAAACATATGGGGGCAAATTGGCCCCCTTTTGG
CTGTCCCTTCGCCAGGTAATGGTAGTTCCAGTGGGACCAACCTGTGATGAATATGCCCAAACGTACGACAACAA
TTCCACGATGCCAAATTCATGGCAGACATTGATCTGGATCCAGGCTGTACATTGAATAAAAAGATTTCGAAATGCA
CAGTTAGCACAGTATAACTTCATTTTAGTTGTTGGTGAAAAAGAGAAAATCACTGGCACTGTTAATATCCGCACA
AGAGACAATAAGGTCCACGGGAACGCACCATTTCTGAAACTATCGAGCGGCTACAGCAGCTCAAAGAGTTCCGC
AGCAAACAGGCAGAAGAAGATTTTAAATGAAAAAATTACCCAGATTGGCTCCATGGAAAAGGAGGAACAGCGTTT
CCGTAAAATTGACTTTGTACTCGAAAACGTCAATTTATATTGAACTTGGAGGAGGAGTTTGGCAAAGTCTGAAAT
AGGTCAACCTGCAGGCGTAACATTTTTTGACCTAGTCAGTTTTTAAACAATGTGCATTTGAAGGAGTTAATTTAA
AGAGAGCCAATAAAATGATTTTACTCATTCACTATCTGAGTACTGGAAGTGAAACATGAGGAATGCTTTAGTGTA
ATGTGGGAGAACTTTTTGTAAATTTAATGCAATTGAAAAAGTTTTCAAATTCAATTAAGATACTAGAATTGGT
TATGGTGTAAACCGAATTC

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FIGURE 92

MGGEEKPIGAGEEKQKEGGKKKNKEGSGDGGRAELNPWEYIYTRLEMYNILKAEHDSILA EKA EKDSKPIKVTL
PDGKQVDAESWKTPYQIACGISQGLADNTVIAKVNNVVWDLDRPLEEDCTLELLKFEDEEAQAVYWHSSAHIMG
EGMERVYGGCLCYGPPiENGfYYDMYLEEGGVSSNDFSSLEALCKKIIKEKQAFERLEVKKETLLAMFKYNKFKC
RILNEKVNTPTTTVYRCGPLIDLRCRGPVHRHTGKIKALKIHKNSSTYWEKGADMETLQRIYGISFPDPKMLKEWE
KFQEEAKNRDHRKIGRDQELYFFHELSPGSCFFLPKGVYIYNALIEFIRSEYRKRGFQEVVTPNIFNSRLWMTSG
HWQHYSENMF SFEVEKELFALKPMNCPGHSLMFDHRPRSWRELPLRLADFGGLHRNELSGALTGLTRVRRFQDD
AHIFCAMEQIEDEIKGCLDFLRTVYSVFGFSFKLNLSTRPEKFLGDI EVWDQAEKQLENSLNEFGEKWE LNSGDG
AFYGPKIDIQIKDAIGRYHQCATIQ LDFQLPIRFNLTYVSHDGEDKKRPVIVHRAILGSVERMIAILTENYGGKL
APFWLSPRQVMVVPVGPTCDEYAQNVRQQFHDAKFMAIDLDPGCTLNKKIRNAQLAQYNFILVVGEKEKITGTV
NIRTRDNKVHGERTISETIERLQQLKEFRSKQAE EEF

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FIGURE 93

GGCACCGCGCGGGACGGAGCTTGGCTGTTGGTCGGTGGGTTCCTGTCGGCGGGCGGCCAAGGAGGAGGAGACACA
GTTGGAGCAGCTCCGTGGGCTGACTGGGGCGAGGCCTCAGCAGCGCGAGCTTGAGTGCGGCCGAGCCTGCGGCGC
CTTCCCCTGCGGGTGGGGACGAGCGGGCCCCGCGGCGTCATCGGCGGGCAGGAGCCGCCGCGCCTCGGCCTAGCA
TGTCGGAAGCGGGCGAGGAGCAGCCCATGGAGACGACGGGCGCCACCGAGAACGGACATGAGGCCGTCCCCGAAG
CGAGTCGCGGGCCGGGCTGGACGGGCGCCGCGGGCGGGGCTGGAGGCGCGACCGCCGCGCCCCGAGCGGGAATCA
GAACGGCGCCGAGGGACCATCAACGCCAGCAAGAACGAGGAGGACGCGGGAAAAATGTTCTGTTGGTGGCCTGA
GCTGGGATACTAGCAAAAAAGATTTAAAAGACTATTTTACTAAATTTGGAGAGGTCGTTGACTGTACAATAAAAA
TGGATCCCAACACTGGACGGTCAAGAGGGTTTGGGTTTATCCTGTTCAAAGATGCAGCCAGTGTGGAGAAGGTCC
TAGACCAGAAGGAGCACAGGCTGGATGGCCGTGTCAATTGACCCTAAAAAGCCATGGCTATGAAGAAGGACCCGG
TCAAGAAAATCTTCGTTGGGGTCTGAATCCTGAAAGTCCCACTGAGGAAAAGATCAGGGAGTACTTTGGCGAGT
TTGGGGAGATTGAGGCCATTGAATTGCCAATGGATCCAAAGTTGAACAAAAGACGAGGTTTTGTGTTTATCACCT
TTAAAGAAGAAGAACCCGTGAAGAAGTTCTGGAGAAAAAGTTCCATACTGTCAGTGGAAGCAAGTGTGAGATCA
AGGTGGCCCAGCCCAAAGAAGTCTATCAGCAGCAGCAGTATGGCTCTGGGGGCCGTGGAAACCGCAACCGAGGGA
ACCGAGGCAGCGGAGGTGGTGGTGGAGGTGGAGGTGAGAGTCAGAGTCAGAGTTGGAATCAGGGCTACGGCAACTACTGGA
ACCAGGGCTACGGCTACCAGCAGGGCTACGGGCTGGCTATGGCGGCTACGACTACTCGCCCTATGGCTATTACG
GCTACGGCCCCGGCTACGACTACAGTCAGGGTAGTACAACTACGGCAAGAGCCAGCGACGTGGTGGCCATCAGA
ATAACTACAAGCCATACTTGAGGCGGCCAAGGGAGCGACCAACTGATCGCACACATGCTTTGTTTGGATATGGAGT
GAACACAATTATGTACCAAATTTAACTTGGCAAACCTTCTATTGCCTGTCCCATGTGCATCTTATTTAAATTTTC
CCCCATGGAAATCACTCTCCTGTTGACTATTTCCAGAGCTCTAGGTGTTTAGGCAGCGTGTGGTGTCTGAGAGGC
CATAGCGCCATCATGGGCTGATTTTTATTACCAGGTCCCCCAGAAGCAGGTGAGAGGCTCTGCTTCCTGCTGCCG
CTCTGCAGCCTGGACCTGTGGACCCTGGTTGTAAAGAGTAAATTGTATCTTAGGAAACAGTGTACCTTTTTTTT
CACCTTTTAATTTTATATTATTTGCGTCATACATTTCTGTAAACGGAAGTGTTAATTTTACTGTACTTTTTGGTA
CCCCTTTTGGGAATCTAATGTAATTGTAAGGTATTTTACACGTGTCCTGATTTTGCCACAACCTGGATATTGAAGC
TATCCAAGCTTTTGAAATAAAATTTAAAAACCCCAAGCCTGGGTGAGTGTGGGAAAAAAAAAAAAAAAAA

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FIGURE 94

MSEAGEEQPMETT GATENGHEAVPEASRGRGWTGAAAGLEARPPRPRAGIRTAPRDQINASKNEEDAGKMFVGGL
SWDTSKKDLKDYFTKFGEVVDCTIKMDPNTGRSRGFGFILFKDAASVEKVLDQKEHRLDGRVIDPKKAMAMKKDP
VKKIFVGGLNPESPTEEKIREYFGEFGEIEAIELPMDPKLNKRRGFVFITFKEEEPVKKVLEKKFHTVSGSKCEI
KVAQPKEVYQQQQYSGGRGNRNRNRGSGGGGGGGGQSQSWNQGYGNYWNQGYGYQQGYGPGYGGYDYSPIGY
GYGPGYDYSQGSTNYGKSQRRGGHQNNYKPY

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FIGURE 95

GCCGGGGAAGTCATGCTCGCTTCACGGAGGCAATAGCTAGCCGGTGTCTGTGGGAGGTTATGTTTATTTGAGACT
TCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGCTGCCTGCCTTCTTGCCATGTCT
AACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCCGCACCAAAAGCACCTCAAAGAAGGAA
AAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCCTAGCAAGGTTCAAAGGCGATGGCGTAAAATATAAGGCC
AAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGACTCTATGATGAACTAAAG
GGAATGGCGGCACGTGGTCTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAACATTTCCCTTTCTGGGATA
AAAATAATTGATGAGAAAAGTGGGGTAATAGAGCATGAACATCCAGTAAATAAGATTTCTTTTATTGCCCCGTGAT
GTGACAGACAACCGGGCATTGTTGTTACGTGTGTGGAGGAGAAGGCCAGCATCAGTTTTTTTACCATAAAAACCGGG
CAACAGGCTGAACCATTAGTTGTTGATCTTAAAGACCTTTTTTCAAGTTATCTATAATGTAAAGAAAAGGAAGAA
GAAAAGAAAAGATAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCTAAGGATTCTAGATGACCAA
ACTAACAACTGAAATCGGGTGTGACCAGATGGATTTGTTTGGGGACATGTCTACACCTCCTGACCTAAATAGT
CCAACAGAAAGCAAAGATATCCTGTTAGTGGATCTAAACTCTGAAATCGACACCAATCAGAATTCTTTAAGAGAA
AATCCATTCTTAAACAAACGGGCATCACCTCCTGTTCTCTTCTCGACCAACGCCTCAGGCATCCTTCTTGCTGAA
AATGCCTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCCTGATCCTTTCCGTGACGATCCTTTTACACAG
CCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCCAGATCAGAAGAAAAGAGAATTCGAGTAGCTCG
TCTACTCCGCTGAGTAATGGGCCCCCTGAATGGTGTGTTGACTACTTTGGTCAAGCAATTTGACCAGATCTCTAAC
CGGACTGGCAAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTCAAGTTTCGCAAAACCCAGCCAGCAGTGAGAACT
CAAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAAATCCTCCCCGAACCCCTTTTGTGGGAAGCCCT
CCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGAAGCTCTGTCCAGTCCCTACCACATGACTCC
ATAGCCATTATCCACCTCCACAAAGTACCAAAACAGGAAGAGGCAGAAGGACTGCTAAGTCTTCAGCCAATGAC
TTGCTTGATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTCAGGCCAGGCGTCACCCACAGGACAACCTACA
GCCCTGCAGCCCAACCCCTCTGGATCTCTTCAAACAAGTGCTCCTGCCCCAGTGGGGCCCCCTGGTGGGTCTAGGT
GGTGTAAGTGTACACTCCCTCAGGCAGGACCATGGAACACAGCATCTTTGGTCTTCAATCAGTCCCCTTCAATG
GCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCAGCCCGTCATTTTTGGTACAAGTCCAGCTGTT
TCAGGTTGGAACAGCCCTTACCCTTTGCAGCCTCAACTCCCCCTCCAGTGCCCTGTTGTCTGGGGCCCTTCTGCA
TCTGTGGCACCAATGCTTGGTCAACAACAAGCCCTTTGGGGAATCCTTTTTCAGAGCAATATTTTTCCAGCTCCT
GCTGTGTCCACTCAGCCCCCATCCATGCACTCCTCTCTCTGCTCACTCCTCCTCAGCCACCTCCCAGAGCTGGC
CCTCCCAAGGACATCTCCAGTGATGCCTTCACTGCCTTAGACCCACTTGGGGATAAAGAGATCAAGGATGTGAAA
GAAATGTTTAAAGATTTCAACTGCGGCAGCCACCTGCTGTGCCCCGCGGGAAGGGAGAGCAGACTTCTTCTGGG
ACTTTGAGTGCCCTTGCCAGTTATTTCAACAGCAAGGTTGGCATTCTCAGGAGAATGCAGACCATGATGACTTT
GATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAGCCAGCTCCAGACAAGTTTCCCTGCCAGTTACC
AAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCTTTTGGTTTCATCACAAGCCTCTGTGGCTTCT
TCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAATCCTTTTGCCATAAATTCTGAACTTGGTCTGC
AGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAACAAAGCTGATAGCCAGACACGTTCTGATTTT
TGCCCTTGTTCCAGCTTTGACGTATTATCTGTTGCCTTATTTCTCATTTGCCTCTTCTACTTGTAATAATGCTTTT
ACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAATAAATAAGATCCTAAACTCTCTAGCTTAAG
TGTAATAAGTACAGTAGTTTCCCTACTGAACCCCTACCTCTTGTGTCCCTGGAACCTTCTAGAACACCTGCCTT
CTACCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATCATACTGTTTTGAATAAATTTTCAAATCCTTA
TTGTTTCAGAGTTGTTTGGGGTTCTGTTTCAGAGCATAAAACCTAAAGGTTATAGTAGAACAAGGCACCTTCTTA
AAAGAAAATCTTGCTTCAGACCATCAGTTACAGAGAATTTCTAAAGTAAATTTGAAGCAACTACAACCTTCTCCTT
AGACACTTTGGAATCTAACCACTTAAGGACCTTTTTAAAGAGATAGCTTCTCTTCTTTCTGAAGATCAATTTCTC
CCAAGGCCAAGATTGCTCTTTTCTCCATTTCTTGCTAGCTATTGCAAATGAGGGAAGAACATTATTCTCTCTC
CTCCCCCTTTTTTTCTGATTCTTTTTTTCAGTCAGTTTGTCTCTGGGTCAAGTAGTATTACCACCCTTTCACAA
GCAACAGACTCTCACAGGGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 96

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDPDARGDKMSQDSMMK
LKGMAARGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFTIK
TGQQAEPVLDLKDQFQVIYNVKKKEEEKKKIEEASKAVENGSEALRILDDQTNKLKSGVDQMDLFGDMSTPPDL
NSPTESKDILLVDLNLSEIDTNQNSLRENPFITNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDFFRDDPF
TQPDQSTPSSFDLSPDKKENSSTPLSNGPLNGDVDFYFGQQFDQISNRTGKQEAQAGPWPFFSSSQTPAV
RTQNGVSEREQNGFSVKSSPNPFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRRRTAKSSA
NDLLASDIFAPPVSEPSGQASPTGQPTALQPNPLDLFKTSAPAPVGPLVGLGGVTVTLPQAGPWNTASLVFNQSP
SMAPGAMMGQPSGFSQPVIFGTSPAVSGWNQPSFFAASPPPPVPPVWGSPASVAPNAWSTTSPLGNPFQSNIFP
APAVSTQPPSMHSSLLVTPPQPPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTS
SGTILSAFASYFNSKVGIPQENADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASV
ASSQPVSEMYRDPFGNPFA

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FIGURE 97

GCCGGGGAAGTCATGCTCGCTTCACGGAGGCAATAGCTAGCCGGTGTCTGTGGGAGGTTATGTTTATTTGAGACT
TCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGTGCTGCCTGCCTTCTTGCCATGCTCT
AACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCGCACCAAAAGCACCCCTCAAAGAAGGAA
AAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCCTAGCAAGGTTCAAAGGCGATGGCGTAAAAATATAAGGCC
AAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGACTCTATGATGAACTAAAG
GGAATGGCGGCACGTGGTCTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAACATTTCCCTTTCTGGGATA
AAAATAATTGATGAGAAAAGTGGGGTAATAGAGCATGAACATCCAGTAAATAAGATTTCTTTTATTGCCCGTGAT
GTGACAGACAACCGGGCATTGTTGATTACGTGTGTGGAGGAGAAGGCCAGCATCAGTTTTTTTACCATAAAAACCGGG
CAACAGGCTGAACCATTTAGTTGTTGATCTTAAAGACCTTTTTTCAAGTTATCTATAATGTAAAGAAAAAGGAAGAA
GAAAAGAAAAAGATAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCTAAGGATTCTAGATGACC
ACTAACAAAGTGAATCGGGTGTGACCAGATGGATTTGTTTGGGGACATGTCTACACCTCCTGACCTAAATAGT
CCAACAGAAAGCAAAGATATCCTGTTAGTGGATCTAAACTCTGAAATCGACACCAATCAGAATTTCTTAAAGAGAA
AATCCATTCTTAAACAAACGGCATCACCTCCTGTTCTCTTCCCTCGACCAACGCCTCAGGCATCCTTCTTGCTGAA
AATGCCTTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCCTGATCCTTTCCGTGACGATCCTTTTACACAG
CCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCCAGATCAGAAGAAAGAGAATTTCGAGTAGCTCG
TCTACTCCGCTGAGTAATGGGCCCTGAATGGTGATGTTGACTACTTTGGTTCAGCAATTTGACCAGATCTCTAAC
CGGACTGGCAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTTCAAGTTTCGAAACCCAGCCAGCAGTGAGAACT
CAAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAAATCCTCCCGAACCCCTTTGTGGGAAGCCCT
CCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGAAGCTCTGTCCAGTCCTCACCACATGACTCC
ATAGCCATTATCCCACCTCCACAAAGTACCAAACCAGGAAGAGGCAGAAGGACTGCTAAGTCTTCAGCCAATGAC
TTGCTTGCATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTCAGGCCAGGCGTCACCCACAGGACAACCTACA
GCCCTGCAGCCCCAACCTCTGGATCTCTTCAAACAAGTGCTCCTGCCCCAGTGGGGCCCTTGGTGGGTCTAGGT
GGTGTAACTGTCACTCCCTCAGGCAGGACCATGGAACACAGCATCTTTGGTCTTCAATCAGTCCCCTTCAATG
GCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCAGCCCGTCATTTTTGGTACAAGTCCAGCTGTT
TCAGGTTGGAACCAGCCTTCACCCCTTGCAGCCTCAACTCCCCCTCCAGTGCCTGTTGTCTGGGGCCCTTCTGCA
TCTGTGGCACCCAATGCTTGGTCAACAACAAGCCCTTGGGGAATCCTTTTCAGAGCAATATTTTTCCAGCTCCT
GCTGTGTCCACTCAGCCCCCATCCATGCACTCCTCTCCTGGTCACTCCTCCTCAGCCACCTCCCAGAGCTGGC
CCTCCCAAGGACATCTCCAGTGTGCCTTCACTGCCTTAGACCCACTTGGGGATAAAGAGATCAAGGATGTGAAA
GAAATGTTTAAAGATTTCAAAGTGCAGGACCCCTGCTGTGCCCGCGCGGAAGGGAGAGCAGACTTCTTCTGGG
ACTTTGAGTGCCTTTGCCAGTTATTTCAACAGCAAGGTTGGCATTCTCAGGAGAATGCAGACCATGATGACTTT
GATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAAGCCAGCTCCCAGACAAGTTTTCCCTGCCAGTTACC
AAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCTTTTGGTTTCATCACAAGCCTCTGTGGCTTCT
TCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAATCCTTTTGCCATAATTCTGAACTTGGTCTGC
AGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAACAAAGCTGATAGCCAGACACGTTCTGATTTCT
TGCCCTTGTTCAGCTTTGACGTATTATCTGTTGCCCTATTCTCATTGCCTCTTCTACTTGTAAATGCTTTTCT
ACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAATAAATTAAGATCCTAAACTCTCTAGCTTAAG
TGTAATGAAGTACAGTAGTTTCCCTACTGAACCCCTACCTCTTGTGTCCCTGGAACCTTCTAGAACACCTGCCTT
CTACCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATCATACTGTTTTGAATAAATTTTCAAATCCTTA
TTGTTTCAGAGTTGTTTGGGGGTTCTGTTTTCAGAGCATAAACCTAAAGGTTATAGTAGAACAAGGCACCTTCTTA
AAAGAAATCTTGCTTCAGACCATCAGTTACAGAGAATTTCTTAAAGTAAATTAAGCAACTACAACCTTCTCCTT
AGACACTTTGGAATCTAACCACTTAAGGACCTTTTTTAAAGAGATAGCTTCTTCTTTCTGAAGATCAATTTCTC
CCAAGGCCAAGATTGTCCTTTTCTCCATTTCTTGCTAGCTATTGCAAATGAGGGAAGAACATTATTCTCTCTC
CTCCCTTTTTTTTCTGATTCTTTTTTTCAGTCAGTTTGTCTCTGGGTTCAAGTAGTATTACCACCTTTTCAAA
GCAACAGACTCTCACAGGGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 98

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDPDARGDKMSQDSMMK
LKGMAARGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFT
TGQQAEPVVDLKDLEFQVIYNVKKKEEEKKIEEASKAVENGSEALRILDDQTNKLKSGVDQMDLFGDMSTPPDL
NSPTESKDILLVDLNLSEIDTNQNSLRENPFLLTNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDPFRDDPF
TQPDQSTPSSFDSLKSPDQKKENSSSSSTPLSNGPLNGDVDFGQQFDQISNRTGKQEAQAGPWPFSSTQTPAV
RTQNGVSEREQNGFSVKSSPNPFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRGRRTAKSSA
NDLLASDIFAPPVSEPSGQASPTGQPTALQPNPLDLFKTSAPAPVGPLVGLGGVTVTLPQAGPWNTASLVFNQSP
SMAFGAMMGQP SGFSQPVI FGTS PAVSGWNQPSFFAASPPVPVWGP SASVAPNAWSTTSPLGNPFQSNIFP
APAVSTQPPSMHSSLLVTPPQPPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTS
SGTLSAFASYFNSKVGIPQENADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASV
ASSQPVSSSEMYRDPFGNPFA

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FIGURE 99

AGCGCTCAGATACGCGACGCGTAGCAGGCGGGGACCGAACGGGTGCCTCAGTGTCTTCCCCTCCCCTCGCCTGG
CCTCGCCGTCTCTCCCCGAGCCGGACCGGAACATATGTGATCCCGGAAGTTCCGGGGCCTTTGCTGTGTGGGAT
AAACAGTAATGGCGGAGGCTGCAACTCCCGGAACAACAGCCACAACATCAGGAGCAGGAGCGGCAGCGGCGACGG
CGGCAGCAGCCTCCCCACCCCGATCCCCACAGTCACCGCCCCGTCCCTGGGGGCGGGCGGAGGGGGCGGCGGCA
GCGACGGCAGCGGGCGGGCTGGACTAAACAGGTCACCTGCAGGTATTTTATGCATGGGGTTTGTAAAGGAAGGAG
ACAACGTGTCGCTACTCGCATGACCTCTCTGACAGTCCGTATAGTGTAGTGTGCAAGTATTTTCAGCGAGGGTACT
GTATTTATGGAGACCGCTGCAGATATGAACATAGCAAACCATTGAAACAGGAAGAAGCAACTGCTACAGAGCTAA
CTACAAAGTCATCCCTTGCTGCTTCTCAAGTCTCTCATCGATAGTTGGACCACTTGTTGAAATGAATACAGGCG
AAGCTGAGTCAAGAAATTCAAACCTTTGCAACTGTAGGAGCAGGTTTCAGAGGACTGGGTGAATGCTATTGAGTTTG
TTCTGGGCAACCCTACTGTGGCCGTACTGCGCCTTCTGCACTGAAGCACCCCTGCAGGGCTCAGTGACCAAGG
AAGAATCAGAGAAAGAGCAAACCGCCGTGGAGACAAAGAAGCAGCTGTGCCCTATGCTGCAGTGGGAGAGTGCC
GATACGGGGAGAACTGTGTGTATCTCCACGGAGATTCTTGACATGTGTGGGCTGCAGCTCTGCATCCAATGG
ATGCTGCCCAGAGATCGCAGCATATCAAATCGTGCATTGAGGCCATGAGAAGGACATGGAGCTCTCATTGTCCG
TGCAGCGCAGCAAGGACATGGTGTGTGGGATCTGCATGGAGGTGGTCTATGAGAAAGCCAACCCCACTGAGCGCC
GCTTCGGGATCCTCTCCAACGCAACACCTACTGTCTCAAGTGCATTGCAAGTGGAGGAGTGCTAAGCAAT
TTGAGAGCAAGATCATAAAGTCCTGCCAGAATGCCGATCAGTCTAACTTTGTCAATTCCAAGTGAAGTACTGGG
TGGAGGAGAAAGAAGAGAAGCAGAACTCATTCTGAAATACAAGGAGGCAATGAGCAACAAGGCGTGCAGGTATT
TTGATGAAGGACGTGGGAGCTGCCCATTTGGAGGGAAGTGTCTTACAAGCATGCGTACCCTGATGGCCGTAGAG
AGGAGCCACAGAGACAGAAAGTGGGAACATCAAGCAGATACCGGGCCCCAACGAAGGAACCACTTCTGGGAACCTCA
TTGAGGAAAGAGAGAACAGCAACCCCTTTGACAACGATGAAGAAGAGGTTGTACCTTTGAGCTGGGCGAGATGT
TGCTTATGCTTTTGGCTGCAGGTGGGGACGACGAACCTAACAGACTCTGAAGATGAGTGGGACTTGTTTCATGATG
AGCTGGAAGATTTTTATGACTTGGATCTATAGCAACCTTGCGTGGCGTGTGAAGTGGTCTGCTGACCTCAGACAG
CAGCTGTCCCCTGTGGTGGTGTGGCAGTGCCTGTGTTCTCTCCTAGGCAGGCCTCTCAACTCCAGGTGCTGTCTT
AAGAATTTTTACCAGGGCCTGTCTTCTCAACCCCTCACCTTTCCCTGAGGAGTGTGTTGTTTTCCCTGTTGAAA
AAAGTTACAAAAATAAATCTTAAAGTTAGTTTTTTGTAACACGAATTTAACTGTCAGACAGTTAGTGTAGGTGTG
TTGCGTCATCTGTTTTCAACCAGATTGCATTTATGGACTTTTACACACTCATTTTGAGGACCCCAAGTTCAAAA
GTAAGCAGTGGCCCTGCTTTGGGGTCCAAGAATAGGAGTGTGGGTGAAGGGACCTAAGCTGGCCAATAGCCC
TCTGCCCCAGACATGGGATGTGGATCCTTGAGGTTTTCTGGTGAATCTGCACATCTGTGTTTTTATATCTGTTC
CTACCCTGTAATCCCTACCACGTGCATTGTTCTGTGGTTTTGGTCTCTTGTGTTAATTGCACACAAGTAATACTA
CTGGGTAAACCAGAATCAGGTGTGAATGTGTTGAGATTTTTTACTGTTTTGCATGATAGGAAAATTGAGAAAGAAT
ACGTATAAAAGATAGAGAGGCATAACATCAATGCAGAGTTGGAAGTTGGCTCCCAAGGGCTGACATGGTGTGAGT
GTGTGGGTGTGTGATAAGCTTCTCATCCCTGCATAGATGCAGTATTCTTAGCCTTAGTAGAAAAACCTGGTTTTAG
TGGTTTAAGCCTTGTGTGGCAGATAGATCTTAAAGGGCAAAGCAGTATATTGGTAGTTGTCAATATAGCAGTGCT
AGCTCTGTCTATATAAATAGAGAAATGGGGTTAGCCATAGAGGTTAAAACTACCTGGTTATCCCATATAATAACA
CAAACCTGGGTCTTGGATACACAGTTGTATTTAATGTTTTACGATCTAGCCTTTCCAGTACAGGCACCTTCTGAGA
AACCTTTGTCTCACTTGAGGCATTTGTTGTGCGGTTTTTGTGTTTTGTTTTGTGGGTATTGCTCATTCCAC
CCCTGAGCTTTCAGGTAGACAGCGTATTCAAACCTCTGTTCTAAGGTGTTTATTGTAGTGGAGTAATGGGTTT
GCAGTGATAAGTCATACTTTTCCACCGAAAGGGAGGGCTTGGGAATCCCTGAGATTAGCTAAAGTTAAGTTGTTG
GAAGAATTCCTTGATTGGAAATTGTACCTTTGTGTTTTGTGCTGTCTGTTTCTGAAAATAACTCGGGGATGCTCC
TGGTTTGTCCATCTACTGCTTTGATTCCCTTGGATCCCAACCATTTCTTCACTTTAAGAAAAACAAATAATTGTT
GCAGAGGTCTCTGTATTTTGCAGCTGCCCTTTTGTAAAGACACTTTTCCCAATAAAACAATTAAAAA
AAA

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FIGURE 100

MAEAATPGTTATTSGAGAAAATAAAASPTPIPTVTAPSLGAGGGGGGSDGSGGGWTKQVTCRYFMHGVCKEGDNC
RYSHDLSDSPYSVVKYFQRGYCIYGDRCRYEHSKPLKQEEATATELTTKSSLAASSSLSSIVGPLVEMNTGEAE
SRNSNFATVGAGSEDWVNAIEFVPGQPYCGRTAPSCTEAPLQGSVTKEESEKEQTAVETKKQLCPYAAVGECRYG
ENCVYLHGDSCDMCGLQLLHPMDAAQRSQHIKSCIEAHEKDMELSFVQVRSKDMVCGICMEVVYEKANPSERRFG
ILSNCNHTYCLKCIRKWRSAKQFESKIIKSCPECRITSNFVIPSEYWVEEKEEKQKLILKYKEAMSNKACRYFDE
GRGSCPFGGNCFYKHAYPDGRREEPQRQKVGTSRRYRAQRRNHFWELEERENSNPFDNDEEEVVT FELGEMLLM
LLAAGGDDELTDSEDEWDLFHDLEDFYDLDL

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FIGURE 101

AGATGTTTAAAAATACTTTGATXCTCXGTTTCCACCTCTCTTAAATTGTCTTTCCCTATGTTAAATATACAGTCA
TCACXTTGCTGAAAAAAGTTTCGCAATGAGAACAATCATCTAAAAXTGGCTGTAACTAGGTCAGGCGCGGTTGCTC
ATGCCTGTAATCCCACCACCTTTGGGAGGCCGAGGCAATTGGATCACCTGAGGTCAGGATTTTGAGACCAGCTTGA
CCAACATGGTGGAATCCCATCTCTACTAAAAATACAAAAAATTAGCCGGGTGTGGTGGCACACCCCTGTAATCCC
ACCTACTCAGGAGGCTGAGGCAGGAAAATCCCTTGAACCCAGGAGGCAAAGGTTGCATTGAGCCGAAATAACACC
ACTGCACTCCAGCCTGGACGATAGAGTGAGACCCCATCTCAAAAAAAGAGCAGCTGTGACAAATGCCTGTATTGA
ATTGCAGGTCAGTCTTCCACCTCCACTACCGGTGCCAAAAAAGGGCTGCCCCAAAAGGAACTAAAAGGGATCCA
GCTTTGAATTCTGGTGTCTCTCAAAAGCCTGATCCTGCCAAAACCAAGAATCGCCGCAAAGGAAGCCATCCACT
TCTGATGATTCTGACTCTAATTTTGAGAAAATTGTTTCGAAAGCAGTCACAAGCAAGGTGAGTGTGATCCTAGT
CAGTCCTTTTGCTGTAGATGTTCTGAAACACGTAACCTAAGCCATTGTTCTTAAAAATTGGCATATCTTTAAGAA
AATTAACCTCTCATATTCTGTTAGCTTTTACTGTACATATTTAGTTTTAACAAGTTAAATATGCCACTTATTTGG
CCAATGGAAGAGTTGGCCTTAGATCTGCTTCTTATTACTTGGTAGAAAATAGAAAACCTCCTGAATATAGTGTCT
TGATACATTTTTTTACATTACAATTATGTTGTGAGATTTACAATGTGCAAGTTACCTGGGCTTTTCTCTTTTGA
AATCCAAGGGGGAGAGTGATGACTTCCATATGGACTTTGACTCAGCTGTGGCTCCTCGGGCAAATCTGTACGGG
CAAAGAAACCTATAAAGTACCTGGAAGAGTCAGATGAAGATGATCTGTTTTAAATGTGAGGCGATTATTTTAAG
TAATTATCTTACCAAGCCCAAGACTGGTTTTAAAGTTACCTGAAGCTCTTAACTTCCTCCCCTCTGAATTTAGTT
TGGGGAAGGTGTTTTTAGTACAAGACATCAAAGTGAAGTAAAGCCCAAGTGTCTTTAGCTTTTTATAATACTGT
ATAAATAGTGACCATCTCATGGGCATTGTTTTCTTCTCTGCTTTGTCTGTGTTTTGAGTCTGCTTCTTTGTCTT
TAAACCTGATTTTTAAGTTCTTCTGAAGTGTAGAAATAGCTATCTGATCACTTCAGCGTAAAGCAGTGTGTTTA
TTAACCATCCACTAAGCTAAAAGTAGAGCAGTTTGATTTAAAGTGTCACTCTTCCTCCTTTTCTACTTTTCAGTA
GATATGAGATAGAGCATAATTATCTGTTTTATCTTAGTTTTATACATAATTTACCATCAGATAGAAGTTTATGGT
TCTAGTACAGATACTCTACTACACTCAGCCTCTTATGTGCCAAGTTTTTCTTTAAGCAATGAGAAATTGCTCATG
TTCTTCATCTTCTCAAATCATCAGAGGCCGAAGAAAAACACTTTGGCTGTGTCTATAACTTGACACAGTCAATAG
AATGAAGAAAATTAGAGTAGTTATGTGATTATTTTCAAGCTCTTGACCTGTCCCCTCTGGCTGCCTCTGAGTCTGAA
TCTCCCAAAGAGAGAAACCAATTTCTAAGAGGACTGGATTGCAGAAGACTCGGGGACAACATTTGATCCAAGATC
TTAAATGTTATATTGATAACCATGCTCAGCAATGAGCTATTAGATTCATTTTGGGAAATCTCCATAATTTCAATT
TGTAAGCTTTGTTAAGACCTGTCTACATTGTTATATGTGTGTGACTTGAGTAATGTTATCAACGTTTTTGTAAAT
ATTTACTATGTTTTTCTATTAGCTAAATTCCAACAATTTGTACTTTAATAAAATGTTCTAAACATTGAAA

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FIGURE 102

TAGCTGGATTCCAGCCATTGCTGCAGCTGCTCCACAGCCCTTTTCAGGACCCAAACAACCGCAGCCGCTGTTCCC
AGGATGGTGATCCGTGTATATATTGCATCTTCCTCTGGCTCTACAGCGATTAAGAAGAAACAACAAGATGTGCTT
GGTTTCCTAGAAGCCAACAAAATAGGATTTGAAGAAAAAGATATTGCAGCCAATGAAGAGAATCGGAAGTGGATG
AGAGAAAATGTACCTGAAAATAGTCGACCAGCCACAGGTTACCCCTGCCACCTCAGATTTTCAATGAAAGCCAG
TATCGCGGGGACTATGATGCCTTCTTTGAAGCCAGAGAAAATAATGCAGTGTATGCCTTCTTAGGCTTGACAGCC
CCACCTGGTTCAAAGGAAGCAGAAGTGCAAGCAAAGCAGCAAGCATTGAACCTTAAGCACTGTGCTTTAAGCATCC
TGAAAAATGAGTCTCCATTGCTTTTATAAAATAGCAGAATTAGCTTTGCTTCAAAAGAAATAGGCTTAATGTTGA
AATAATAGATTAGTTGGGTTTTACATGCAAACATTCAAATGAATACAAAATTAAAAATTGAACATTATGGTGA
TTATGGTGAGGAGAATGGGATATTAACATAAAATTATATTAATAAGTAGATATCGTAGAAATAGTGTGTACCT
GCCAAGCCATCCTGTATACACCAATGATTTTACAAAGAAAACACCCTTCCCTCCTTCTGCCATTACTATGGCAAC
TTAAGTGTATCTGCAGCTCTACATTAAAAAGGAGAAAGAGAAATAACCTGTCTCTCATTCCCTAAGTTGCCTCATT
AATTTTCATGAACAAGAATATGTACCTTTTTGATGCTATATTACTGCGATTAAAAAAGTTCTTGCAGGTAATGTT
TATGTATAGTTAAACGTTGTAATTTCTTATCGTAATTATAACATTCCCATTCTTTGTAGATGAAACTCTACATAT
GAACCACAGATTTTCTGAGCTTCTAAATGTAGCCTTTTCATTGCACATTTTCAGTGATCAGAATAGATATCCTTTTA
CACGCACAAAAGCAATAGATTCATTTCAGTGGACAAGTTCCCTTGTTTAACTACACAGCTATGATGGAATCATATAT
CCAAGTTCCTTGCCCTCAGTGAAATATGCATATGTATATCATGAAGTGGGATGCCAAGTAAGCTTAAATGCATTCT
TCTAGCAAAGAGATTAGACTTTTAAATAACTCTTATAAAACAGGTTGGCGATCATTCCCAAGATTGGTTTCCCT
TGAGTTTTTTGTTAAACAAATCTTAGTAGTTTTGCCCGTTTAAACAACCTCACAATCGTAAATGCTACTATTCCCT
AAGATATCTTACCTTTTTATTTCAGTTTAGCCATGTATTGTATGAGTGTATTAGTCTAAGCAGTGAGAATCTTTT
CTATGCCTCTATTCCAGCAAAAAGTAGAAGTATCAAATAAAAAGGGCAACTTTTAAATATTAAGCCTGAAGACT
TCTAAAAAGACAAGAAACATGGCCTAAATAACCAACATAGATTTACATAGTAAGTTTCACACTACCTTATTACCA
AAAGCAAACACCTCTTACTTTAACTACATTATCATGTATATCTATTGTATGCTGGTCTTTACTTTTTGCCAAAA
TCAACATATAATGAAGAGATGCCTTTGTTTGATGAGATTCAAACCTTGATGCTATGCTTTAAATAAACTCAGTAC
TTTTAGAAACATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 103

MVIRVYIASSSGSTAIKKKQQDVLGFLEANKIGFEEKDIAANEENRKWMRENVPENSRPATGYPLPPQIFNESQY
RGDYDAFFEARENNAVYAFLGLTAPPGSKEAEVQAKQQA

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FIGURE 104

GCCGCGCCGGCTCTGGGCACTCAGCATCGTTTCCTTTTCTCCGCTGGAGCAGCTATGCGCGCGGTGAAGACCCT
GAACCCCAAGGCCGAGGTGGCCCCGAGCGCAGGCGGCGCTGGCGGTCAACATCAGCGCAGCGCGGGGTCTGCAGGA
CGTGCTAAGGACCAACCTGGGGCCCCAAGGGCACCATGAAGATGCTCGTTTCTGGCGCTGGAGACATCAAACCTTAC
TAAAGACGGCAATGTGCTGCTTCACGAAATGCAAATTCAACACCCAACAGCTTCCTTAATAGCAAAGGTAGCAAC
AGCCCAGGATGATATAACTGGTGATGGTACGACTTCTAATGTCTAATCATTGGAGAGCTGCTGAAACAGGCGGA
TCTCTACATTTCTGAAGGCCTTCATCCTAGAATAATCACTGAAGGATTTGAAGCTGCAAAGGAAAAGGCCCTTCA
GTTTTTGAAGAAGTCAAAGTAAGCAGAGAGATGGACAGGGAAACACTTATAGATGTGGCCAGAACATCTCTTCG
TACTAAAGTTCATGCTGAACCTTGACAGATGTCCTAACAGAGGCTGTAGTGGACTCCATTTTGGCCATTAAAAAGCA
AGATGAACCTATTGATCTCTTCATGATTGAGATCATGGAGATGAAACATAAATCTGAAACTGATACAAGCTTAAT
CAGAGGGCTTGTTTTGGACCACGGAGCACGGCATCCTGATATGAAGAAAAGGGTGGAGGATGCATACATCCTCAC
TTGTAACGTGTCATTAGAGTATGAGAAAACAGAAGTGAATTCTGGCTTTTTTTACAAGAGTGCAGAAGAGAGAGA
AAAACCTCGTGAAAGCTGAAAGAAAATTCATTGAAGATAGGGTTAAAAAAATAATAGAACTGAAAAGGAAAGTCTG
TGGCGATTGAGATAAAGGATTTGTTGTTATTAATCAAAGGGAATTGACCCCTTTTCTTAGATGCTCTTTCAA
AGAAGGCATAGTCGCTCTGCGCAGAGCTAAAAGGAGAAATATGGAGAGGCTGACTCTTGCTTGTGGTGGGGTAGC
CCTGAATTCCTTTGACGACCTAAGTCTGACTGCTTGGGACATGCAGGACTTGTATATGAGTATACATTGGGAGA
AGAGAAGTTTACCTTTATTGAGAAATGTAACAACCTCGTTCTGTACATTATTGATCAAAGGACCAAATAAGCA
CACACTCACTCAGATCAAAGATGCAGTGAGGGACGGCTTGAGGGCTGTCAAAAATGCTATTGATGATGGCTGTGT
GGTTCCAGGTGCTGGTGCCGTGGAAGTGGCAATGGCAGAAGCCCTGATTAAACATAAGCCAGTGTAAGGGCAG
GGCACAGCTTGAGTCCAAGCATTTGCTGATGCATTGCTCATTATTCCCAAGGTTCTTGCTCAGAACTCTGGTTT
TGACCTTCAGGAAACATTAGTTAAAATTCAGCAGAACATTGAGAATCAGGTCAGCTTGTTGGGTGTGGACCTGAA
CACAGGTGAGCCAATGGTGGCAGCAGAAGTAGGCGTATGGGATAACTATTGTGTAAAGAAACAGCTTCTTCACTC
CTGCACTGTGATTGCCACCAACATTCTCTTGGTTGATGAGATCATGCGAGCTGGAATGTCTTCTCTGAAAGGTTG
AATTGAAGCTTCTCTGTATCTGAATCTTGAAGACTGCAAAGTGATCCTGAGGATTACAGCTGTGGAATTTTTGT
CCAAGCTTCAAATAATTTTGAAGAAAATTTTCCCATATGAAAAAAGGAGAGAACTGGCATCTGTTGAAATTTG
GAAGTTCTGAAATTATAGTATTTTTTAAAAATTGCACTGAAGTGTATACACATAAAGCAGGTCTTTTATCCAGTGA
ACAGGATGTTTTGCTTTAGCAGCAGTGACATAAAATTCATGTTAGATAAGCATATGTTACTTACCTTGTTATTA
AATATTTCTTGAAAAGCAAATTTTAAATGGTTAATTTTATGTGGACGTATGTTAAATTATCCAACTACCTATTG
TTAAGCATTTGGTTTTTAAAAATTTTATGCTAATATAAATGCTCAAGTAATTTAAATATTTGAAAGCATCCCTGTT
GGTATAAATTTCTGAGTAAATGCATTGGATCAGTTGGACTTTGAACGCCCTTTGAAATGGCTTTGCTAAATGCT
CCCGCCACAAAGTTGTAGGAAATGGGAAGAGGAGTCAACTAGAGGCAAGGGAGTTGAGAGAGCTGCAACTGTAAA
GGGCAAGAACAGGCAGAGGTAAAAAGATGATGGAAGGTGTGGTGAATAAGGGCCACGGTTATTGGGTGAAATTTG
AGATGTAGGCCAACTGTATTTCAAGCTTCTGAACCTAAGGCAAAATATTCATCGCAAAGTCTCTAGCGTCATAT
TTTTCTACCCAAATTACGTTTCCACGAGTTATTATATATAGTTGGTCTATCTCTGCAGTCCTTGAAGGTGAAGT
TGTGTGTTACTAGGCTGTGTTTTGGGATGTCAGCAGTGGCCTGAAGTGAGTTGTGCAATAAATGTTAAGTTGAAA
CCTCAAAAAAAA

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FIGURE 105

MAAVKTLNPKAEVARAQAALAVNISAARGLQDVLRTNLGPKGTMKMLVSGAGDIKLTGDGNVLLHEMQIQHPTAS
LIAKVATAQDDITGDGTTSNVLIIGELLKQADLYISEGLHPRIITEGFEEAKEKALQFLEEVKVSREMDRETLID
VARTSLRTKVHAEADVLTEAVVDSILAIAKKQDEPIDLFMIEIMEMKHKSETDTSILIRGLVLDHGARHPDMKKRV
EDAYILTCNVSLEYEKTEVNSGFFYKSAEEREKLVKAERKFIEDRVKKIIEELKRKVCSDKGFVVINQKGIDPF
SLDALSKEGIVALRRARRNMRERLTLACGGVALNSFDDLSPDCLGHAGLVYETLGEKFTFIEKCNNPRSVTLL
IKGENKHTLTQIKDAVRDGLRAVKNAIDDGCVVPGAGAVEVAMAEALIKHKPSVKGRAQLGVQAFADALLIIPKV
LAQNSGFDLQETLVKIQAEHSESGQLVGVDLNTGEPMVAAEVGVWDNYCVKKQLLHSCTVIATNILLVDEIMRAG
MSSLKG

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FIGURE 106A

GGCACGAGCGGCGGAGGCAGTGTCTCCCGGTCGCGCGTGGAGGTCGGTCGCTCAGAGCTGCTGGGCGCAGTTTCT
CCGCTGCTGCTTCGGGCGGGCTGTATCGGCGAGCGAGCGAGTTCCCGCGAGTTCTCGGTGGCGCTCCCCCTTCC
TTTCAGTCTCCACGGACTGGCCCCCTCGTCCTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTTC
GTTGGGCCGATTCCCCGCCGCTTCTCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAG
ATGAACCAGATTATGATGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCAT
TTTCAAGCCTGATAGTTTTTGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCACCACCTGTCTTCA
TACCCTGACGAAGTGCACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCACAGAAATACATTTGCCA
CCAACAGAGTAGCCAAATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTGAGGATGAAAATTTTATT
GAGTCTTCTGTTGCCAAATTAATGCCCTGAGGAAAAGTGGCCAGTTCTGTGATGTTGACTTCAGGTCTGTGGC
CATGAAATGTTAGCACACAGAGCAGTGCTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGT
GATCCTCATGGAATTTCTCACGTTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTGTAATTATGCC
TACACTGCTCAGTTGAAAGCAGATAAGGAATTGGTAAAAGATGTTTATTCTGCAGCAAAAAAGCTGAAGATGGAT
CGAGTAAAGCAGGTTTGTGGTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCGAAATTTT
GCAAGTTGTATGGGAGACTCCCGTTTGTGAATAAGGTTGATGCTTATATTCAGGAGCATTGTTACAAATTTCT
GAAGAGGAGGAGTTTCTTAAGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGTCTGCCAGC
AATGGCAAATATATACAAAGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAG
CTGATGGAAGAGGTTCAAACCTTGTACTACTCAGCTGATCACAAGCTGCTTGATGGGAACCTACTAGATGGACAG
GCTGAGGTGTTTGGCAGTGATGATGACCACATTAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAG
CAGATAAGTAGCAGTTCAACTGGATGTCTCTCTTCTCAAATGCTACAGTACAAAGCCCTAAGCATGAGTGAAAA
ATCGTTGCTTCAGAAAAAGACTTCAAATAACACTTACTTGTGCCTGGCTGTGCTGGATGGTATATTCTGTGTCATT
TTTCTTCATGGGAGAAAAAGCCACAGAGCTCACCAACAAGTACTCCAAAACTAAGTAAGAGTTTAAGCTTTGAG
ATGCAACAAGATGAGCTAATCGAAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAG
ATGAATGGCAAACCTCATAGCTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCGAATGCTATAATCCA
CATAACAGATCACTGGTCTTTCTTGCTCCCATGAGAACACCAAGAGCCCGATTTCAAATGGCTGTACTCATGGGC
CAGCTCTATGTGGTAGGTGGATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATA
GATGACTGGATTCTGTTCCAGAATTGAGAACTAACCGTTGTAATGCAGGAGTGTGTGCTCTGAATGGAAAGTTA
TACATCGTTGGTGGCTCTGATCCATATGGTCAAAAAGGACTGAAAAATTGTGATGTATTTGATCCTGTAACAAAG
TTGTGGACAAGCTGTGCCCCCTCTTAACATTTCGGAGACACCAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTAC
ATAATCGGAGGTGCAGAATCTTGAATTGTCTGAACACAGTAGAACGATACAATCCTGAAAAATAATACCTGGACT
TTAATTGCACCCATGAATGTGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAAAAGTGTGTTGTATGTGGT
GGCTTTGATGGTTCTCATGCCATCAGTTGTGTGGAAATGTATGATCCAACCTAGAAATGAATGGAAGATGATGGGA
AATATGACTTCACCAAGGAGCAATGCTGGGATTGCAACTGTAGGGAACACCATTTATGCAGTGGGAGGATTGAT
GGCAATGAATTTCTGAATACGGTGGAGTCTATAACCTTGAGTCAAATGAATGGAGCCCCATACAAAGATTTTC
CAGTTTTAAACAAATTTAAGACCTCTCAAACCTAACAGGCTTAGTGATGTAATTATGGTTAGCAGAGGTACACTTG
TGAATAAAGAGGGTGGGTGGGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGCATATTGCATACTATTAAC
ATGCTGTACATACTTTTTGGGTTTATTTGGAAAGGAATGCAAAGATGAAGGTCTGTTTTGTGACTTTTAAGACT
TTGGTTATTTTACTTTTTGGAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCCCTCTCCT
CCACATTTGTTTTGCCAATTTGCACATTAAATGACTCTTCCCTCAAATGTGTACTATGGGGTAAAAGGGGTAGGG
TTTAAAGATGTAGACAGTTGGGTTTTTTAAGGGCCCTTTTTCAATAACTGGAACTCTATAACAAAGGATACTT
ATTTAAATAGATGACATTGACTATTTTTGTTTTTATTTAAAGGAAGCTTACATGCCTACCAATATTTAATCTTTT
ATGATTGCCTTTTTATAACTTTTTATATTCTCAGCAGAGTGCTTTACCAATTGAAGTAAATGTGGCAGGCTGGA
GTTATTGAAGCAGAGTGGCAGTCTTCAGTTTGCAGAGTAGGGGTCTGTCTTTTAACTCTGAGTGCAAACCTTCAG
AGTTCTTGCTTGGCTGCAGTTTTTTTTCTTCAAGAATGCAGTACTAACATTTATTTGAGTGGAGTTACTGAACA
GTAACATAGCTGTGATTTTTGGTATTTGAAACACTGGTTTTAAATATTTTGACTGTTGAGGGTATGTTTTATAT
AGCAAGACATTATATAGCAGTAAAAAATGGTGTTTTATCTTCTATATAATTCCTGTTTTTATTATTAACAAACA
GTCCTAAATAGCAGCCCTCAATTGTGAAAAATTTACTTTAACTACATTAGGTTGTGAATGCAGGTTTTATCAG
AACTATGTTTTTGTTCAGTTTATCTGTTTCATATGGATAAATATTGGTTGGGATGACTTGGTGTCTAATGTGTAGT
GCTACACACCTAACTTATGGGGCCAAAATAGCATGTCCTAATGCTTGCTGCTGATTTAAACACATTAAAGGTACT

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FIGURE 106B

TTGCAGGAAATCCTTGCACCATGGGATTAATATCCAATTGCTGCTTGTACACTCATTCTACTAAAAGTTTTGA
GAAATTTTTTTTTCCAGTAATGAGCTTAAGAAATTTGTGGAAAATAACTCACCTGGCATCTTACATCTGAAATAA
GGAATGATATAAGGTTTTTTTTTCTCACAGAAGATGAAGCACACAGGAACCTAATGGGCCAACTGGGATGAGGTG
ACTATTCTGAGATGACTATTCAGTGGCTAACTTGGGTTAGGAAGAAAATAATTAGGTATTTTCTCAAATGTTCA
CTGGTACTCTGCCACTTTATTTCTCTCATCTGTTACACAAAGAACCACCAGGAAAGCAAATCAGTTTGGTTGGTA
ACTCTGTAATTCCTAACTATCACTGGTTTGGTTCTGGACTAAAACCTACATTGACAGATTGAATTTGCCTAATATG
ATGACTGTTTTTAATATGGATCTGTATGTGTTCTATTAGCCCAAGGAAATAAAATTTTAGTTGAGGATTCAAAA
AAAAAAAAAAAA

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FIGURE 107

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKF
DDLNPEAVEVLLNYAYTAQLKADKELVKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLL
NKVDAYIQEHLLQISEEEFLKLPRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYY
SADHKLLDGNLLDGQAEVFGSDDDHIQFVQKKPPRENGHKQISSSTGCLSSPNATVQSPKHEWKIVASEKTSNN
TYLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKLSFEMQQDELIKPMSPMQYARSGLGTAEMNGKLIAGG
YNREECLRTVECYNPHTDHSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVPELR
TNRNAGVCALNGKLYIVGGSDPYGQKGLKNCDVFDPVTKLWTSCAPLNIRRHQSAVCELGGYLYIIGGAESWNC
LNTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHAISCVEMYDPTRNEWKMMGNMTSPRSNAG
IATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPTYTKIFQF

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FIGURE 108A

CGAGACGGAAGCGGGCTGGGAGGCGTCGGCGGGCGGCAGCGCACGTGGTGACGTGCGAGGGGGTGCGGGCGCGAGCG
GTGGCGGGCGGGCGGAGGCAGTGTCTCCCGGTCGCGCGTGGAGGTCGGTCGCTCAGAGCTGCTGGGCGCAGTTTCT
CCGCTGCTGCTTCGGCGCGGCTGTATCGGCGAGCGAGCGAGTTCCCGCGAGTTCTCGGTGGCGCTCCCCCTTCC
TTTCAGTCTCCACGGACTGGCCCCCTCGTCTTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTTCC
GTTGGGCCGATTCCCGCCCGCTTCCTCCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAG
ATGAACCAGATTATGATGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCAT
TTTCAAGCCTGATAGTTTTGGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCAACCACCTGTCTTCA
TACCCTGACGAAGTGCACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCCCAGAAATACATTTGCCA
CCAACAGAGTAGCCAAATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTTGAGGATGAAAATTTTATT
GAGTCTTCTGTGCCAAATTAATGCCCTGAGGAAAAGTGGCCAGTTCTGTGATGTTGACTTCAGGTCTGTGGC
CATGAAATGTTAGCACACAGAGCAGTGTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGT
GATCCTCATGGAATTTCTCACGTTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTTGAATTATGCC
TACACTGCTCAGTTGAAAGCAGATAAGGAATTGGTAAAAGATGTTTATTCTGCAGCAAAAAAGCTGAAGATGGAT
CGAGTAAAGCAGGTTTGTTGGTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCAGAAATTTT
GCAAGTTGTATGGGAGACTCCCGTTTGTGTAATAAGGTTGATGCTTATATTCAGGAGCATTGTGTACAAATTTCT
GAAGAGGAGGAGTTTCTTAAGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGCTTGCCAGC
AATGGCAAATTATATACAAAGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAG
CTGATGGAAGAGGTTCAAACCTTGTAATACTACTCAGCTGATCACAAGCTGCTTGATGGGAACCTACTAGATGGACAG
GCTGAGGTGTTTGGCAGTGATGATGACCACATTCAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAG
CAGATAAGTAGCAGTTCAACTGGATGTCTCTCTTCTCCAAATGCTACAGTACAAAGCCCTAAGCATGAGTGGAAA
ATCGTTGCTTCAGAAAAGACTTCAAATAACACTTACTTGTGCCTGGCTGTGCTGGATGGTATATTCTGTGTCTATT
TTTCTTCATGGGAGAAACAGCCACAGAGCTCACCAACAAGTACTCCAAAATAAGTAAGAGTTTAAGCTTTGAG
ATGCAACAAGATGAGCTAATCGAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAG
ATGAATGGCAAATCATAGCTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCAATGCTATAATCCA
CATAAGATCAGTGGTCCCTTTCTTGTCTCCATGAGAACACCAAGAGCCCGATTTCAAATGGCTGTACTCATGGGC
CAGCTCTATGTGGTAGGTGGATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATA
GATGACTGGATTCCCTGTTCCAGAATTGAGAACTAACCGTTGTAATGCAGGAGTGTGTGCTCTGAATGGAAAGTTA
TACATCGTTGGTGGCTCTGATCCATATGGTCAAAAAGGACTGAAAAATTGTGATGTATTTGATCCTGTAACAAAG
TTGTGGACAAGCTGTGCCCCCTCTTAACATTTCGGAGACACCAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTAC
ATAATCGGAGGTGCAGAATCTTGGAATTGTCTGAACACAGTAGAACGATACAATCCTGAAAATAATACCTGGACT
TTAATTGCACCCATGAATGTGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAAAATGTTTGTATGTGGT
GGCTTTGATGGTTCTCATGCCATCAGTTGTGTGGAAATGTATGATCCAATAGAAATGAATGGAAGATGATGGGA
AATATGACTTCACCAAGGAGCAATGCTGGGATTGCAACTGTAGGGAAACACCATTTATGCAGTGGGAGGATTTCGAT
GGCAATGAATTTCTGAATACGGTGGAAAGTCTATAACCTTGAGTCAAATGAATGGAGCCCCCTATACAAAGATTTTC
CAGTTTTAACAAATTTAAGACCCCTCTCAAATAACAGGCTTAGTGATGTAATTATGGTTAGTAGAGGTACACTTG
TGAATAAAGAGGGTGGGTGGGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGATATTGCATACTATTAAAC
ATGCTGTACATACTTTTTGGGTTTTATTTGGAAAGGAATGCAAGATGAAGGTCTGTTTTGTGTACTTTTTAAGACT
TTGGTTATTTTACTTTTTGGAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCCCTCTCCT
CCACATTTGTTTTGCCAATTTGCACATTAAATGACTCTTCCCTCAAATGTGTACTATGGGGTAAAAGGGGTAGGG
TTTAAAGATGTAGACAGTTGGGTTTTTTAAGGGCCCTTTTTCAATAACTGGAACACTCTATAACAAAGGATACTT
ATTTAAATAGATGACATTGACTATTTTTGTTTTTATTAAGGAAGCTTACATGCCTACCAATATTTAATCTTTT
ATGATTGCCTTTTTATAACTTTTTATATTCTCAGCAGAGTGCTTTACCAATTGAAGTAAATGTGGCAGGCTGGA
GTTATTGAAGCAGAGTGGCAGTCTTCAGTTTCAGAGTAGGGGTCTGTCTTTTAACTCTGAGTGCAAACTTCAG
AGTTCTTGCTTGGCTGCAGTTTTTTTTCTTCAAGAATGCAGTACTAACATTTATTTGAGTGGAGTTACTGAACA
GTAACATAGCTGTGATTTTTGGTATTTGAAACACTGGTTTTAAATATTTGACTTGTGAGGGTATGTTTTATAT
AGCAAGACATTATATAGCAGTAAAAAATGGTGTTTTATCTCTATATAATTCCTGTTTTTATTATTAACAAAACA
GTCCTAAATAGCAGCCCTCAATTGTGAAAAAATTTACTTTAACTACATTAGGTTGTGAATGCAGGTTTTATCAG
AACTATGTTTTGTTTCAAGTTTATCTGTTTATATGGATAAATATTGGTTGGGATGACTTGGTGTCTAATGTGTAGT

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FIGURE 108B

GCTACACACCTAACTTATGGGGCCAAAATAGCATGTCCTAATGCTTGCTGCTGATTAAACACATTAAAGGTACT
TTCAGG

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FIGURE 109

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKF
DDLNPEAVEVLLNYAYTAQLKADKELVKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLL
NKVDAYIQEHL LQISEEEEF LKLPRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYY
SADHKLLDGNLLDGQAEVFGSDDDH IQFVQKKPPRENGHKQISSSSTGCLSSPNATVQSPKHEWKIVASEKTSNN
TYLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKSLSFEMQQDELIKPMSPMQYARSGLGTAEMNGKLI AAGG
YNREECLRTVECYNPHTDHWSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVPELR
TNRCNAGVCALNGKLYIVGGSDPYGQKGLKNCDVFDVPTKLWTSCAPLNIRRHQSAVCELGGYLYIIGGAESWNC
LNTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHAI SCVEMYDPTRNEWKMMGNMTSPRSNAG
IATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPYTKIFQF

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FIGURE 110

GAGTTCCAGCAGTCCGCGAGCTGCCGTCCGCTCCGCGGGGGGGCGGGCCGGGCACCCCGGGGCGCGGAGGAGCG
CTCCTCGCTTCTCTCCTTCCCCCTGCCGCACTCCGCCGGACCCTCCCGCCGGCCCGCGCCGCTGCACTCGCCCT
CTCCTCTCGCCCCCGGCAAACTTTCGGCCCCCTCCCCGCCCTCGCCCGTTATTTCGTCTGGCTCAAGCCCGGCC
ACGCCGCCCCAAGGGCTCCTCCCGACCTCCCGGCCTGCCGTCCGGCCACTGCGGGATCCAGAAACATGTCGACC
ACACTTCTGTCCGCTTCTACGATGTGCACTTCTTGTGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAAC
AACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTGGCCGCCGCCCCAGCTCGGGCTTCGCGCCGGGATTCTC
CGACGGCACTCGGCCAGCAACCTGCATGCACTCGCCCCACCCGCGCCAGCCCCGGCAGCTGCTCGCCCAAGTTC
CCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCGGCGGCGGCGGTCCGACCTCCTACGGCACCTTAAGGAG
CCGTGCGGGGGCGGCGGCACAGCCCTGCTCAACAAGGAGAACAATTCGGGACCGCTCGTTTAGCGAGAACGGC
GATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAGCAGAAGGGGGGCGGCGGCTCCCAGATCAACTCCACGCGC
TACAAGACCAGCTGTGCCGGCCCTTCGAGGAGAGCGGCACGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCAT
GGCTTCCACGAGCTGCGCAGCCTGACTCGCCATCCGAAGTACAAGACCAGCTGTGCCGCACCTTTCATACCATC
GGCTTCTGCCCCATATGGGCCGCGCTGCCACTTCATCCACAACGCGGACGAGCGGCGGCCCCGCGCCGTCGGGGGGC
GCCTCCGGGGACCTGCGTGCTTTTGGCACGCGCATGCGTTGCACCTGGGCTTCCGCGGGAGCCGCGGCCCAAG
TTGCACCACAGCCTCAGCTTCTCGGGCTTCCCGTCGGGCCACCATCAGCCCCGGGCGGCCTCGAGTCGCCGCTG
CTGCTCGACAGCCCCACGTGCGGCACGCCGCCGCCCTCCTGCTCTTCGGCCTCGTCTGCTCCTCCTCCGCC
TCCTCCTGTTCTCGGCCTCCGCGGCCTCCACGCCCTCGGGCGCCCCGACATGCTGCGCCTCCGCGGCGGCCGCG
GCTGCGGCGCCTCTGCTGTACGGCACCGGGGGCGCCGAGGACCTGCTGGCGCCGGGGGCCCCGTCGCGGCCTGC
TCGTGCGCCTCGTGCGCCAACAACGCCTTCGCCTTCGGTCCGGAGCTCAGCAGCCTCATCACGCCGCTCGCCATC
CAGACCCACAACCTTTCGCGCCGTGGCCGCCGCCGCTACTACCGCAGTCAGCAGCAGCAGCAGCAGCAGGGCCTG
GCGCCCCCGCGCAGCCGCCGCGGCCGCCAGCGCGACCCTCCCCGCCGGGGCGCCGCACCTCCCTCGCCGCC
TTCAGCTTCCAGCTGCCGCGCCGCTGTCCGACTCGCCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTG
TCGGACCGCGACAGCTACCTAAGCGGCTCCCTGAGCTCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGAC
CCTGGCCGCGCCTGCCAATCTTCAGCCGCCTCTCCATCTCCGACGACTGAGGCAAGAGGGCGCCAGTGAGGAGG
AAGGGAAGGCGGTTTCAAGATGTTGGAGGACACCCCTCGCCATCTCGCCCTTGCTGGGGGCACGGGAGTGGGGG
GGTGACATGGGCCCTAGGCAGACTGCAAGCCCGACCGAGCACTTGGACTCGAACTCTGTGCCGGGAGGGGCCCCC
ACCCCTCCTTTTTTCGGTTTTCTCTTGTCTTTTTTTTTTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAA
AAGTCGAACTTTTTCTGTTGAACAAAATATTACAAACAGGGCAGTTGTGATACGAATAGAACAAAAAAAAAAAAA
AAACACTTAAACTTTTGTAGGACTCCGATGAGTTTGGGACTTCAGGAAAAATCAACCCAGCACCAGCAGCTACCA
ACCACCATTCATCTCTTCACTTGAACAGCATTAGTTAAGTCCAGATGTGGGAACCCCTTCTCTTGGAAGAAGTTC
CTAATTGTGTCTCAGACCGGTGTAAACAAACCAGCCAGCCGCCACCTTGCTAAACCTATAAGCTTTTTTAAATCC
AATATATTCTGCCAAGAATATGCCTTGATAGTTAGCCCTCAGCCCATAGGTGTTTTTTGTTTTTTAACAGAATTA
TATATGTCTGGGGGTAAAAAACCTTGCAATCCAAAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACTTA
GTGGATGTTTCAGTTTAGAACCATTTTGTCTGCTCCCTCTGGAAGCCTTGCGCA

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FIGURE 111

MSTLLSAFYDVDFLCKTEKSLANLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCS
PKFPGAANGSSCGSAAAGGPTSYGTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQOKGGGGSQIN
STRYKTELCRPFEEESGTCKYGEKCQFAHGFFHELRLTRHPKYKTELCTFHTIGFCPYGPRCHFIHNADERRPAP
SGGASGDLRAFGTRDALHLGFPREPRPKLHHSLSFSGFPSGHHQPPGGLESPLLLDSPTSRTPPPPSCSSASSCS
SSASSCSSASAASTPSGAPTCCASAAAAAALLYGTGGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITP
LAIQTHNFAAVAAAAYYRSQQQQQQQLAPPAQPPAPP SATLPAGAAAPPSPPF SFQLPRRLSDSPVFDAPPSP
DSLSDRDSYLSGSLSSGSLSGSESPSLDPGRRLP IFSRLSISDD

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FIGURE 112A

CAGATTTACGAGGTTCTGTTCTAGTGCCAAAGGCTCTTGGTAGTAAATAGTGAGCAAAATAGATACCTGTCTCCT
GATGGATCTTGCCAGCCCCNTCCNTATTTTTTNTTAAGTTATTTATTAAACCACACACACCTTGCAAAGAAAA
GGGAACTGGCAGTCTCTGTAGAGGAAGCCGGTGGCATCGCTCAGAGCCACAACTGTATTTCTAAACAGCCCTT
TCCCTGGTTCCTCTCTCTGCCCCACTTTTTTTTAAATCCAGACTGTAAAAACACATCTACTGACACTCACTT
TACTTTAAAAAAGAAGAGAAAAAGTAAAGCGTTACAAGACTTTCTCTGGAACCTATAAACTGAAAAAAAT
CCATAAAAGATTAAATCCTGGCGGGTTGTGGGGTGGCGGGGCGCGGGGAGGGGGCGCGGAGTGGAGATTGGC
TCTCTGAGGTGGTCAGGGGGCCCTGTGACAGCTTGGGACTTTCAGCACCTGGTTTGGGGTCATTATCTGCTCAAC
TGTCAGGACCCCCACCCCCAACCCACAGCCACCAACACAACCATCGTAGAAGGGAACACAACACAGAGGGTCTT
TTTTCATTTTTTTTAAAAATCGTTTGGTTGTGTTTTTGTTCATGGGGGAGCTTTAAACTCATTATTGCAA
CACTAGTTCCATTTTTTCGCCAGGGTTCCAATAACACGGCATCATAAAGGCAACGCAACCCACAGTTCTCAAGACA
TTTACCACGGTCACTACATCCGGCAGCGGGTGGCCCTAGCTCCTGTGCCCCCGCCCTTTCTCCCCGCCCG
CCCCGGAGCTCAGCCGATTCTGAGGCTCCAACCTACCCACTCCCTCCCCGGGCGCCGCCCGCGCCTTCC
CCCATTCTTACTCCCTCGAGGAGAGCCACAGGTTGCAAATCCAACCAACCTCGCAATCTATTTTGCAAAATCAC
TCACAAAGATCTCCCTTTCGCGCCCGCGCCCGCTCCTCCGCGCCGGGTCCCCTCAGCCACGGCCACAAAGTGCC
CTTCTCTCTCTGAGTCTTGACATAAGGAACGCGGGCTGGGGCTCTGTTTCGTCTTTCTCCTCGCCCAAGGTAA
GGACCTCGGGAATCTGAAGCCTGGCGTCCACTACGCTCAGGCCCGCAGTTCCCTTTTACAGAGCTTGACCATG
GGAAAAAATAAAATAAAATTTAGGTAAGGGAGGCAACAGCCATTGGGAGCCAACACAGAGTCACGCAGCGCCCAA
AATACAAACACCGCAGCGGCCAGAAATCCCGCCACCTTTCTCGTTCTCCAGGCTGTCTGCGAGGTTCCCTGA
GTCCCCCGCACACTGAAAGGCATCGCAGGTGCAGTGCACCCCTTTCCACCCACCCCAAGAAGCCCTGTCCC
GCCATCAGTCTCTCTCCTCGGGATGAGCAGGGAGAGCGCGCGGAGGTTCCCGACTCCCTCGACTACAACCAAGAA
AGAATAATTTTCAAAGTGTTCAACATCCCCGCCCCCAAGCTCCCCAAAACACAGGGGCAGGGAACACCAAAACAC
TCGGCTCTCGTTAGGAAGATCACGGCTCTGAAAGGAAATAGTAGACACGATACTTCATCTCATCTGGATTATGA
CCAAAAAACAAAAACAAAAACCCAAAGAGTTTCGCTTGCAATTTTTCTTTCCAAATCTCGGTTTCGGCTCGAAGGC
AGGGAATCTAAAGACCGAGGCCGATGGAAGAGAGCCAGCGGGGCGAGCGAGCGGGCAGCCTCCCTTTTGCCTC
CCGGAGTCACCCGTTATTTCGTCTGCTCAAGCCCGGCCACGCCGCCCAAGGGCTCCTCCCGACCTCCCGGCCT
GCCGCTCCGGCCACTGCGGGATCCAGAAACATGTCGACCACACTTCTGTCCGCTTCTACGATGTGCACTTCTTG
TGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAACAACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTG
GCCGCCGCCCCAGCTCGGGCTTCGCGCCGGGATTCTCCGACGGCACTCGGCCAGCAACCTGCATGCACTCGCC
CACCCCGCGCCAGCCCCGGCAGCTGCTCGCCCAAGTTCCCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCG
GCGGCCGGCGGTCCGACCTCCTACGGCACCTTAAGGAGCCGTGGGGGGCGGCGGCACAGCCCTGCTCAACAAG
GAGAACAAATTCCGGGACCGCTCGTTTAGCGAGAACGGCGATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAG
CAGAAGGGGGGCGGCGGTCCAGATCAACTCCACGCGCTACAAGACCGAGCTGTGCCGGCCCTTCGAGGAGAGC
GGCAGGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCATGGCTTCACGAGCTGCGCAGCCTGACTCGCCATCCG
AAGTACAAGACCGAGCTGTGCCGACCTTTATACCATCGGCTTCTGCCCCATGCGGCCGCGCTGCCACTTCATC
CACAACGCGGACGAGCGGCGGCCCGCGCCGTTCGGGGGGCGCCTCCGGGGACCTGCGTGCCCTTTGGCACGCGCGAT
GCGTTGCACCTGGGCTTCCCGCGGGAGCCGCGGCCCAAGTTGCACCACAGCCTCAGCTTCTCGGGCTTCCCGTCG
GGCCACCATCAGCCCCGGGCGGCCTCGAGTCGCCGCTGCTGCTCGACAGCCCCACGTGCGGCACGCCGCCGCCG
CCCTCCTGCTCTTCGGCTCTGTCCTGCTCCTCCTCCGCTCCTCCTGTTTCTCGGCCTCCGCGGCCTCCACGCC
TCGGGCGCCCCGACATGCTGCGCCTCCGCGGCGGCCGCGGCTGCGGCCGCTCTGCTGTACGGCACGGGGGCGCC
GAGGACCTGCTGGCGCGGGGGCCCCGTGCGCGGCCTGCTCGTTCGGCTCTGTCGCCAACAACGCCTTCGCTTC
GGTCCGGAGCTCAGCAGCCTCATCACGCCGCTCGCCATCCAGACCCACAATTTGCCGCGGTGGCGGCCGCCGCC
TACTACCGCAGTCAGCAGCAGCAGCAGCAGGCGCTGGCGCCCCCGCGCAGCCGCCGGCGGCCGCCAGCGCG
ACCCTCCCCGCCGGGGCGCCGCACCTCCCTCGCCGCCCTTCAGCTTCCAGCTGCGCGCGCCGCTGTCCGACTCG
CCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTGTGCGACCGCGACAGCTACCTAAGCGGCTCCCTGAGC
TCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGACCCTGGCCGCCGCTGCCAATCTTCAGCGCCTCTCC
ATCTCCGACGACTGAGGCAAGAGGGCGCCAGTGAGGAGGAAGGGAAGGCGGTTTCAGAGATGTTGGAGGACCCCC
TCGCCATCTCGCCCTTGCTGGGGGACGGGAGTGGGGGGGTGACATGGGCCCTAGGCAGACTGCAAGCCCGACC
GAGCACTTGGACTCGAACTCTGTGCCGGGAGGGGCCCCACCCCTCCTTTTTTCGGTTTCCTCTTGTCTTTTTT

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FIGURE 112B

TTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAAAGTCGAACTTTTCTGTTGAACAAAATATTCACAA
CAGGGCAGTTGTGATACGAATAGAACAAAAAGAAAAAAGAACACTTAAACTTTGTTAGGACTCCGATGAGTTT
GGGACTTCAGGAAAAATCAACCCAGCACCAGCAGCTACCAACCACCATTCCATCTCTTCATTGAACAGCATTAG
TTAAGTCCAGATGTGGGAACCTTCTCTTGGGAAGAAGTTCCTAATTGTGTCTCAGACCGGTGTAAACAAACCAGC
CAGCCGCCACCTTGCTAAACCTATAAGCTTTTTTAAAATCCAATATATTCTGCCAAGAATATGCCTTGATAGTTAG
CCCTCAGCCCATAGGTGTTTTTTGTTTTTTTAAACAGAATTATATATGTCTGGGGGTGAAAAACCCTTGCATTCCA
AAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACCTTAGTGGATGTTTCAGTTTAGAACCATTTTTGTCTGCTCC
CTCTGGAAGCCTTGCGCAGAGCTTACTTTGTAATTGTTGGAGAATAACTGCTGAATTTTTAGCTGTTTTGAGTTG
ATTGCGCACCCTGCACCACAACCTCAATATGAAAACCTATTTAACTTATTTATTATCTTGTGAAAAGTATACAATGA
AAATTTTGTTCATACTGTATTTATCAAGTATGATGAAAAGCAATAGATATATATTCTTTTATTATGTTAAATTAT
GATTGCCATTATTAATCGGGCAAAATGTGGAGTGTATGTTCTTTTACAGTAATATATGCCTTTTGTAACTTCACT
TGTTTATTTTATTGTAAATGAGTACAAAATTCTTAATTTAAGAGATTGTATGTAATATTTATTTTATTAATTTCT
TTCCTTGTTTACGTAAATTTTGAAAGATTGCATGATTTCTTGACAGAAATCGATCTTGATGCTGTGGAAGTAGTT
TGAGGAACATCCTATGAGTTTCTTAGAATGTATAAAGGTTGTAGCCCATCCAACCTCAAAGAAAAAATGACCA
CATACTTTGCAATCAGGCTGAAATGTGGCATGCTTTTCTAATTCCAACCTTATAAACTAGCAAAAAAGTGTTC
TTATTCCACCAGTTCTACTGTGACATACTCGAGTATAAAGACATGTAGCAATAACGGGGAGTGGGGGGGGAGTCT
CACAGTGCCTTTGGGAAGGGCCCGAACTTGCCTTAAATCTTCTCAACCAAATAAGTATTTTATTAGTGCTTGAGA
GAATCTGAATGTAGGATGGGTTCAACTGCACAAAAGGAAAAGATTTTACCACCTTTTTTATATAGATATAAAGT
GAAGCAACCGCCTTAGTGCTGAAATATGTAGTACATGAATATGCCTTGTTTAATTACAGAAAATTCCAAAACCTG
TACTATTTTTTTTTTCCATGTAGAAAGGCAGGAATGTCTCCTAAGCTTTCCTGGACAGCAGATGAATGAGCGGTA
GCTTTAGTTTGTACGTAGGTACAGTTGGAGCACTATATGTACTCTCTGGACTACTTTGGACAGAAGTAGGTTTTT
GAATGTAACAAGATAAGTCAACTTGAGTTGTAATATATTTTGGGGAATCAGCTCACTACAAATTGTGACTGTAAA
CATTGTACTGTAAATGTTTTGTAGTTTTTCCCCAATAAAAATTTTGGGAAAAAAGGTATTAACATGTAAGAGCT
TTCTTTTTTAAACAGGAATGTCTTAGCTTTCTAGCTTCCCAGCTAACCATGTCTGCCATTCCCAGGCTTTGGCAT
GGTGGGGGAGGACTTGAGAGCTGGCAGAGCCAGAGTTCAGAAGAGCCTGCGTCCTCTCAGCCCGTATATATTTT
ATAAGCAAGTTCTTCTAATGAAAGAAAGTAATTATTTGGACTGTCAAGGGCATTAGTT

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FIGURE 113

MEESQRGERAGSLPFCLPESPVIRRGSSPATPPQGLLPTSRPAAPATAGSRNMSTTLLSAFYDVDFLCKTEKSLA
NLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCSPKFGAANGSSCGSAAAGGPTSY
GTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQQKGGGGSQINSTRYKTELCRPFEEESGTCKYGEK
CQFAHGFHELRLTRHPKYKTELCRTFHTIGFCPYGPRCHFIHNADERRPAPSGGASGDLRAFGTRDALHLGFPR
EPRPKLHHSLSFSGFPSGHHQPPGGLESPLLLDSPTSRTPPPPSCSSASSCSSASSCSSASAASTPSGAPTCCA
SAAAAAAAAALLYGTGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITPLAIQTHNFAAVAAAAAYRSQQQQ
QQQGLAPPAQPPAPPSATLPAGAAAPPSPFFSFQLPRRLSDSPVFDAPPSPDLSDRDSYLSGSLSSGSLSGSE
SPSLDPGRRLPIFSRLSISDD

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FIGURE 114

GAGTTCCAGCAGTCCGCGAGCTGCCGTCCGGCTCCGCGGGGGGGGGCGGGCCGGGCACCCCGGGGCGCGGAGGAGCG
CTCCTCGCTTCTCTCCTTCCCCCTGCCGCACTCCGCCGGACCTCCCCGCCGGCCCGCGCCGCTGCACTCGCCCT
CTCCTCTCGCCCCCGGGCAAACITTTGGGCCCTCCCCGCCCTCGCCCGTTATTCTGCTGCTGGCTCAAGCCCGGCC
ACGCCGCCCCAAGGGCTCCTCCCGACCTCCCGGCCTGCCGCTCCGGCCACTGCGGGATCCAGAAACATGTCGACC
ACACTTCTGTCCGCTTCTACGATGTCGACTTCTTGTGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAAC
AACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTGGCCGCCGCCCGCCAGCTCGGGCTTCGCGCCGGGATTCTC
CGACGGCACTCGGCCAGCAACCTGCATGCACTCGCCACCCCGCGCCAGCCCGGCAGCTGCTCGCCCAAGTTC
CCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCGCGCGCGCGGTCCGACCTCCTACGGCACCTTAAGGAG
CCGTGCGGGGGCGGGCGGCACAGCCCTGCTCAACAAGGAGAACAATTCGGGACCGCTCGTTTAGCGAGAACGGC
GATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAGAGAAGGGGGGCGGCGGTCCCAGATCAACTCCACGCGC
TACAAGACCGAGCTGTGCCGGCCCTTCGAGGAGAGCGGCACGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCAT
GGCTTCCACGAGCTGCGCAGCCTGACTCGCCATCCGAAGTACAAGACCGAGCTGTGCCGCACCTTTCATACCATC
GGCTTCTGCCCCATATGGGCCGCGTGGCACTTCATCCACAACGCGGACGAGCGGCGGCGCGCGCTCGGGGGG
GCCTCCGGGGACCTGCGTGCCCTTGGCACGCGCATGCGTTGCACCTGGGCTTCCGCGGGAGCCGCGGCCCAAG
TTGACACACAGCTCAGCTTCTCGGGCTTCCGCTCGGGCCACCATCAGCCCCCGGGCGGGCTCGAGTCGCGCGTG
CTGCTCGACAGCCCCACGTGCGGCACGCCGCGCGCCCTCCTGCTCTTCGGCTCGTCTCTCCTCCTCCGCC
TCTCCTGTTTCTCGGCCTCCGCGGCCTCCACGCCCTCGGGCGCCCCGACATGCTGCGCTCCGCGGCGGCGCG
GCTGCGGCGCTCTGCTGTACGGCACCGGGGGCGCGGAGGACCTGCTGGCGCGGGGGCCCCGTGCGCGCCTGC
TCGTGCGCCTCGTGCGCAACAACGCCTTCGCCTTCGGTCCGGAGCTCAGCAGCCTCATCAGCCGCTCGCCATC
CAGACCCACAACITTTGCCGCCGTGGCCGCCGCCGCTACTACCGCAGTCAGCAGCAGCAGCAGCAGGCGCTG
GCGCCCCCGCGCAGCCGCCGGCGCGCCAGCGCGACCTCCCCGCCGGGGCGCGCACCTCCCTCGCCGCC
TTCAGCTTCCAGCTGCCGCGCGCCTGTCCGACTCGCCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTG
TCGGACCGCGACAGCTACCTAAGCGGCTCCCTGAGCTCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGAC
CCTGGCCGCCGCTGCCAATCTTCAGCCGCTCTCCATCTCCGACGACTTGAGGCAAGAGGGCGCCAGTGAGGAGG
AAGGAAGGCGGTTCAGAGATGTTGGAGGACACCCCTCGCCATCTCGCCCTTGCTGGGGGCACGGGAGTGGGGG
GGTGACATGGGCCCCTAGGCAGACTGCAAGCCCGACCGAGCACTTGGAATCGAACTCTGTGCCGGGAGGGGCCCC
ACCCCTCCTTTTTCGGTTTCTCTTGTCTTTTTTTTTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAA
AAGTCGAACTTTTCTGTTGAACAAAATATTACAACAGGGCAGTTGTGATACGAATAGAACAAAAAAAAAAAA
AAACACTTAAACTTTGTTAGGACTCCGATGAGTTTGGGACTTCAGGAAAAATCAACCCAGCACCAGCAGCTACCA
ACCACCATTCATCTCTTCACTTGAACAGCATTAGTTAAGTCCAGATGTGGGAACCCTTCTCTTGAAGAAGTTC
CTAATTGTGTCTCAGACCGGTGTAAACAAACCAGCCAGCCGCCACCTTGCTAAACCTATAAGCTTTTTAAATCC
AATATATTCTGCCAAGAATATGCCTTGATAGTTAGCCCTCAGCCCATAGGTGTTTTTTGTTTTTAAAGAATTA
TATATGTCTGGGGGTGAAAAAACCTTGCAATCCAAAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACTTA
GTGGATGTTTCACTTAGAACCATTTTGTCTGCTCCCTCTGGAAGCCTTGCGCA

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FIGURE 115

MSTLLSAFYDVDFLCKTEKSLANLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCS
PKFPGAANGSSCGSAAAGGPTSYGTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQKGGGGSQIN
STRYKTELCRPFEEESGTCKYGEKCQFAHGFEHLRSLTRHPKYKTELCTRFTHTIGFCPYGPRCHFIHNADERRPAP
SGGASGDLRAFGTRDALHLGFPREPRPKLHHSLSFSGFPPSGHHQPPGGLESPLLLDSPTSRTPPPSCSSASSCS
SSASSCSSASAASTPSGAPTCCASAAAAAALLYGTGGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITP
LAIQTHNFAAVAAAAYYRSQQQQQQQLAPPAQPPAPPSATLPAGAAAPPSPPFQLPRLSDSPVFDAPPSP
DSLSDRDSYLSGSLSSGSLSGSESPSLDPGRRLPIFSRLSISDD

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FIGURE 116

AAAAGAAAAAAAAAAGATTTTTCTTCTCTTAATCGGAATCGTGATGGTGTGGATTATTTCAATGGTGGGGTT
AATATAGCATGTTATCCTGTCTATCTTTTAAAGATTTCTGTATAAGACTGTTGAGCAGTTTTTAAAAATAGTGTAG
GATAATATAAAAAGCAGATAGATGGCGCTATGTTTGATTCTTACAACGAAATTATCACCAGCTTTTTTTCATTCT
TAACTCTTTAAAGGATTCAAACGCAACTCAAATCTGTGCTGGACTTTAAAAAACAATTCAGGACCAAATTTTTT
CTCAGTGTGTGTTTATTCTTATAGGTGTAAATGAGAAGACGTGTTTTTTTCTTCACCGATGCTCCATCCTC
GTATTTCTTTTTCTTGTAAATGTAATCAGATGCCATTTTATATGTGGACGTATTTATACTGGCCAAACATATTT
TTTCTTTTGTCCCTTTTTTTCTTTCTTTCTTTTACTTCCTTTATTTCTTATTCTCCTTTCCNTTTTTNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGTAGTTGTTGTTACCCACGCCATTTTACGTCTCCTTCACTGAAGGG
CTAGAGTTTTTAACTTTTAATTTTTTATATTTAAATGTAGACTTTTGACACTTTTAAAAAACAAAAAAGACAAGA
GAGATGAAAACGTTTGATTATTTCTCAGTGTATTTTGTAAAAAATATATAAAGGGGGTGTAAATCGGTGTAAA
TCGCTGTTTGGATTTCCTGATTTTATAACAGGGCGGCTGGTTAATATCTCACACAGTTTAAAAAATCAGCCCCTA
ATTTCTCCATGTTTACACTTCAATCTGCAGGCTTCTTAAAGTGACAGTATCCCTTAACCTGCCACCAGTGTCCAC
CCTCCGGCCCCCGTCTTGTA AAAAGGGGAGGAGAATTAGCCAAACACTGTAAGCTTTTAAGAAAAACAAAGTTT
AAACGAAATACTGCTCTGTCCAGAGGCTTTAAACTGGTGCAATTACAGCAAAAAGGGATTCTGTAGCTTTAACT
TGTA AACCACATCTTTTTTGCACTTTTTTTATAAGCAAAAACGTGCCGTTTAAACCACTGGATCTATCTAAATGC
CGATTTGAGTTCGCGACACTATGTACTGCGTTTTTCACTCTTGTTTACTATTTAATCCTTTCTACTTGTGCGC
TAAATATAATTGTTTTAGTCTTATGGCATGATGATAGCATATGTGTTTCAAGGTTTATAGCTGTTGTGTTTAAAAAT
TGAAAAAAGTGAAAACATCTTTGTACATTTAAGTCTGTATTATAATAAGCAAAAAGATTGTGTGTATGTATGTT
TAATATAACATGACAGGCACTAGGACGTCTGCCTTTTTAAAGGCAGTTCCGTTAAGGGTTTTTGTTTTTAACTTT
TTTTTGCCATCCATCCTGTGCAATATGCCGTGTAGAATATTTGTCTTAAATTTCAAGGCCACAAAAACAATGTTT
GGGGGAAAAAAAAGAAAAAATCATGCCAGCTAATCATGTCAAGTTCACTGCCTGTCAGATTGTTGATATATACCT
TCTGTAAATAACTTTTTTTGAGAAGGAAATAAAATCAGCTGGAACCTGAAACCCTAAAAAAAATCTATGTCGGGTGC
GGAGAAAGAGGTAATGAAATGGCA

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FIGURE 117

MRRRVFFLHRC SILVFLFPCKCNQMPFYMWTYLYWPNIFFLLSLFFFPFFLLPLFLIPPFXXXXXXXXXXXXX

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FIGURE 118

GGGCGCGCCAGAGACGCAGCCGCGCTCCCACCACCCACACCCACCGCGCCCTCGTTTCGCCTCTTCTCCGGGAGCC
AGTCCGCGCCACCGCCGCGCCGCCCAGGCCATCGCCACCCTCCGCAGCC**CATGT**CCACCAGGTCCGTGTCCTCGTCCT
CCTACCGCAGGATGTTTCGGCGGGCCCGGGCACCGCGAGCCGGCCGAGCTCCAGCCGGAGCTACGTGACTACGTCCA
CCCGCACCTACAGCCTGGGCAGCGCGCTGCGCCCCAGCACCCAGCCGCGAGCCTCTACGCCTCGTCCCCGGGCGGGCG
TGTATGCCACGCGCTCCTCTGCGGTGCGCCTGCGGAGCAGCGTGCCCGGGGTGCGGCTCCTGCAGGACTCGGTGG
ACTTCTCGCTGGCCGACGCCATCAACACCGAGTTCAAGAACACCCGACCAACGAGAAGGTGGAGCTGCAGGAGC
TGAATGACCGCTTCGCCAACTACATCGACAAGGTGCGCTTCCTGGAGCAGCAGAATAAGATCCTGCTGGCCGAGC
TCGAGCAGCTCAAGGGCCAAGGCAAGTCGCGCCTAGGGGACCTCTACGAGGAGGAGATGCGGGAGCTGCGCCGGC
AGGTGGACCAGCTAACCAACGACAAAGCCCGCGTCGAGGTGGAGCGCGACAACCTGGCCGAGGACATCATGCGCC
TCCGGGAGAAAATTGCAGGAGGAGATGCTTCAGAGAGAGGAAGCCGAAAACACCCTGCAATCTTTCAGACAGGATG
TTGACAATGCGTCTCTGGCACGTCTTGACCTTGAACGCAAAGTGGAATCTTTGCAAGAAGAGATTGCCTTTTTGA
ACAACTCCACGAAGAGGAAATCCAGGAGCTGCAGGCTCAGATTCAGGAACAGCATGTCCAAATCGATGTGGATG
TTTCCAAGCCTGACCTCACGGCTGCCCTGCGTGACGTACGTACGCAATATGAAAGTGTGGCTGCCAAGAACCTGC
AGGAGGCAGAAGAATGGTACAAATCCAAGTTTGCTGACCTCTCTGAGGCTGCCAACCGGAACAATGACGCCCTGC
GCCAGGCAAAGCAGGAGTCCACTGAGTACCGGAGACAGGTGCAGTCCCTCACCTGTGAAGTGGATGCCCTTAAAG
GAACCAATGAGTCCCTGGAACGCCAGATGCGTGAAATGGAAGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAG
ACACTATTGGCCGCTGACGATGAGATTGAGAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGAATACCAAG
ACCTGCTCAATGTTAAGATGGCCCTTGACATTGAGATTGCCACCTACAGGAAGCTGCTGGAAGGCGAGGAGAGCA
GGATTTCTCTGCCTCTTCCAACTTTTCTCCCTGAACCTGAGGGGAACTAATCTGGATTCACTCCCTCTGGTTG
ATACCCACTCAAAAAGGACATTCTGATTAAGACGGTTGAACTAGAGATGGACAGGTTATCAACGAACTTCTC
AGCATCACGATGACCTTGAAT**TAAAA**ATTGCACACACTCAGTGGCAGGCGATATATTACCCAGGCAAGAATAAAAA
AGAAATCCCATATCTTAAAGAAACAGCTTTCAAGTGCCCTTCTGCAGTTTTTCAGGAGCGCAAGATAGATTGGGA
ATAGGAATAAGCTCTAGTTCTTAACAACCGACACTCCTACAAGATTTAGAAAAAGTTTACAACATAATCTAGTT
TACAGAAAAATCTTGTGCTAGAATACTTTTTTAAAGGTATTTTGAATACCATTAAACTGCTTTTTTTTTTCCAG
CAAGTATCCAACCAACTTGGTTCTGCTTCAATAAATCTTTGGAAAACCTCCA

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FIGURE 119

MSTRSVSSSSYRRMFGGPGTASRPSSSRSYVTTSTRTYSLGSALRPSTSRSLYASSPGGVYATRSSAVRLRSSVP
GVRLQLQDSVDFSLADAINTEFKNTRTNEKVELQELNDRFANYIDKVRFLQQNKILLAELEQLKGQKSRLGDLY
EEEMRELRRQVDQLTNDKARVEVERDNLAEDIMRLREKLQEEMLOREEAENTLQSFQDQVDNASLARLDLERKVE
SLQEEIAFLKKLHEEEIQELQAQIQEQHVQIDVDVSKPDLTAALRDVRQQYESVAAKNLQEAEEWYKSKFADLSE
AANRNNDALRQAKQESTEYRRQVQSLTCEVDALKGTNESLERQMREMEENFAVEAANYQDTIGRLQDEIQNMKEE
MARHLREYQDLLNVKMALDIEIATYRKLLGEESRISLPLPNFSSLNLRETNLDSLPLVDTHSKRTFLIKTVETR
DGQVINETSQHDDLE

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FIGURE 120

TGCCTGCTGAGGGTGGAGACCCACGAGCCGAGGCCTCCTGCAGTGTTCCTGCACAGCAAACCGCACGCTATGGCTG
ACAGCCGGGATCCCGCCAGCGACCAGATGCAGCACTGGAAGGAGCAGCGGGCCGCGCAGAAAGCTGATGTCCTGA
CCACTGGAGCTGGTAACCCAGTAGGAGACAACTTAATGTTATTACAGTAGGGCCCCGTGGGCCCCCTTCTTGTTT
AGGATGTGGTTTTTCACTGATGAAATGGCTCATTTTGACCGAGAGAGAATTCCTGAGAGAGTTGTGCATGCTAAAG
GAGCAGGGGCCCTTTGGCTACTTTGAGGTCACACATGACATTACCAAATACTCCAAGGCAAAGGTATTTGAGCATA
TTGGAAGAAGACTCCCATCGCAGTTCGGTTCTCCACTGTTGCTGGAGAATCGGGTTCAGCTGACACAGTTCGGG
ACCTTCGTGGGTTTGCAGTGAAATTTTACACAGAAGATGGTAACTGGGATCTCGTTGGAAATAACACCCCCATTT
TCTTCATCAGGGATCCCATATTGTTTCCATCTTTTATCCACAGCCAAAAGAGAAATCCTCAGACACATCTGAAGG
ATCCGGACATGGTCTGGGACTTCTGGAGCCTACGTCCTGAGTCTCTGCATCAGGTTTCTTTCTTGTTTCAGTGATC
GGGGGATTCCAGATGGACATCGCCACATGAATGGATATGGATCACATACTTTCAAGCTGGTTAATGCAAATGGGG
AGGCAGTTTATTGCAAATTCATTATAAGACTGACCAGGGCATCAAAAACCTTTCTGTTGAAGATGCGGCGAGAC
TTTCCAGGAAGATCCTGACTATGGCATCCGGGATCTTTTAAACGCCATTGCCACAGGAAAGTACCCCTCCTGGA
CTTTTTACATCCAGGTGATGACATTTAATCAGGCAGAACTTTTCCATTAAATCCATTGATCTCACCAAGGTTT
GGCCTCACAAAGGACTACCCTCTCATCCCAGTTGGTAACTGGTCTTAAACCGGAATCCAGTTAATTACTTTGCTG
AGGTTGAACAGATAGCCTTCGACCCAAGCAACATGCCACCTGGCATTGAGGCCAGTCTGACAAAATGCTTCAGG
GCCGCTTTTGCCTATCCTGACACTACCGCCATCGCCTGGGACCCAATTATCTTCATATACCTGTGAAGTCTG
CCTACCGTGCTCGAGTGCCAACTACCAGCGTGATGGCCCGATGTGCATGCAGGACAATCAGGGTGGTGCTCCAA
ATTACTACCCCAACAGCTTTGGTGCTCCGGAACAACAGCCTTCTGCCCTGGAGCACAGCATCCAATATTCTGGAG
AAGTGCGGAGATTCAACACTGCCAATGATGATAACGTTACTCAGGTGCGGGCATTCTATGTGAACGTGCTGAATG
AGGAACAGAGGAAACGTCTGTGTGAGAACATTGCCGGCCACCTGAAGGATGCACAAATTTTCATCCAGAAGAAAG
CGGTCAAGAACTTCACTGAGGTCCACCCTGACTACGGGAGCCACATCCAGGCTCTTCTGGACAAGTACAATGCTG
AGAAGCCTAAGAAATGCGATTACACCTTTGTGCAGTCCGGATCTCACTTGGCGGCAAGGGAGAAGGCAAATCTGT
GAGGCCGGGGCCCTGCACCTGTGCAGCGAAGCTTAGCGTTTCATCCGTGTAACCCGCTCATCACTGGATGAAGATT
CTCCTGTGCTAGATGTGCAATGCAAGCTAGTGGCTTCAAAATAGAGAATCCCCTTTCTATAGCAGATTGTGTA
ACAATTTTAATGCTATTTCCCCAGGGGAAAATGAAGGTTAGGATTTAACAGTCATTTAAAAAATTTGTTTT
GACGGATGATTGGATTATTCATTTAAATGATTAGAAGGCAAGTTTCTAGCTAGAAATATGATTTTATTTGACAA
AATTTGTTGAAATTATGTATGTTTACATATCACCTCATGGCCTATTATATTTAAATATGGCTATAAATATATAAA
AAGAAAAGATAAAGATGATCTACTCAGAAATTTTTATTTTTCTAAGGTTCTCATAGGAAAAGTACATTTAATACA
GCAGTGTCATCAGAAGATAACTTGAGCACCGTCATGGCTTAATGTTTATTCCTGATAATAATTGATCAAATTCAT
TTTTTTCACTGGAGTTACATTAATGTTAATTCAGCACTGATTTCAACAACAGATCAATTTGTAATTGCTTACATTT
TTACAATAAATAATCTGTACGTAAGAACA

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FIGURE 121

MADSRDPASDQM QHWKEQRAAQKADVLT TGAGNPVGDKLNVITVGPRGPLL VQDVVFTDEMAHFDRERIPERVVH
AKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVRFSTVAGESGSADTVRDPRGFAVKFYTEDGNWDLVGNNT
PIFFIRDPI LFPSFIHSQKRNPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGHRHMNGYGSHTFKLVNA
NGEAVYCKFHYKTDQG IKNLSVEDAARLSQEDPDYGIRDLFNAIATGKYP SWTFYIQVMTFNQAETFPFNPFDLT
KVWPHKDYPLIPVGKLV LNRNPVNYFAEVEQIAFDPSNMPPGIEASPDKMLQGRLFAYPDTHRHRLGPNYLHIPV
NCPYRARVANYQRDGP MCMQDNQGGAPNYYPN SFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVNV
LNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKNAIHTFVQSGSHLAAREKA
NL

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FIGURE 122

ATCAGCGAGGGATTACGGCGAAATGAGACTGTTCTGTGAGTGATGGCGTCCCGGGTTGCTTGCCGGTGCTGGCCG
CCGCCGGGAGAGCCCCGGGGCAGAGCAGAGGTGCTCATCAGCACTGTAGGCCCGGAAGATTGTGTGGTCCCGTTCC
TGACCCGGCCTAAGGTCCCTGTCTTGCACTGGATAGCGGCAACTACCTCTTCTCCACTAGTGCAATCTGCCGAT
ATTTTTTTTTTGTATCTGGCTGGGAGCAAGATGACCTACTAACCAGTGGCTGGAATGGGAAGCGACAGAGCTGC
AGCCAGCTTTGTCTGCTGCCCTGTACTATTTAGTGGTCCAAGGCAAGAAGGGGGAAGATGTTCTTGGTTTCAGTGC
GGAGAGCCCTGACTCACATTGACCACAGCTTGAGTCGTGAGAAGTGTCTTCTTGGCTGGGGAGACAGAATCTC
TAGCCGACATTGTTTTGTGGGGAGCCCTATACCCATTACTGCAAGATCCCGCCTACCTCCCTGAGGAGCTGAGTG
CCCTGCACAGCTGGTTCCAGACACTGAGTACCCAGGAACCATGTGACGAGCTGCAGAGACTGTACTGAAACAGC
AAGGTGTCTGGCTCTCCGGCCTTACCTCCAAAAGCAGCCCCAGCCAGCCCCGCTGAGGGAAGGGCTGTCACCA
ATGAGCCTGAGGAGGAGGAGCTGGCTACCCTATCTGAGGAGGAGATTGCTATGGCTGTTACTGCTTGGGAGAAGG
GCCTAGAAAGTTTGCCCCGCTGCGGCCCCAGCAGAATCCAGTGTGCTGTGGCTGGAGAAAGGAATGTGCTCA
TCACCAGTGCCCTCCCTTACGTCAACAATGTCCCCACCTTGGGAACATCATTGGTTGTGTGCTCAGTGCCGATG
TCTTTGCCAGGTACTCTCGCCTCCGCCAGTGGAAACACCCTCTATCTGTGTGGGACAGATGAGTATGGTACAGCAA
CAGAGACCAAGGCTCTGGAGGAGGGACTAACCCCCCAGGAGATCTGCGACAAGTACCACATCATCCATGCTGACA
TCTACCGCTGGTTTAACATTTTCGTTTGATATTTTTGGTTCGCCACCACCCTCCACAGCAGACCAAAATCACCAGG
ACATTTTCCAGCAGTTGCTGAAACGAGGTTTTGTGCTGCAAGATACTGTGGAGCAACTGCGATGTGAGCACTGTG
CTCGCTTCTGGCTGACCGCTTCGTGGAGGGCGTGTGTCCCTTCTGTGGCTATGAGGAGGCTCGGGGTGACCAGT
GTGACAAGTGTGGCAAGCTCATCAATGCTGTGAGCTTAAAGAGCCTCAGTGTAAGTCTGCCGATCATGCCCTG
TGGTGAGTCGAGCCAGCACCTGTTTCTGGACCTGCCTAAGCTGGAGAAGCGACTGGAGGAGTGGTTGGGGAGGA
CATTGCTTGGCAGTGACTGGACACCCAATGCCAGTTTATCACCCGTTCTTGGCTTCGGGATGGCCTCAAGCCAC
GCTGCATAACCCGAGACCTCAAATGGGGAACCCCTGTACCCCTTAGAAGGTTTTGAAGACAAGGTATTCTATGTCT
GGTTTGATGCCACTATTGGCTATCTGTCCATCACAGCCAACTACACAGACCAGTGGGAGAGATGGTGGGAAGAAC
CAGAGCAAGTGGACCTGTATCAGTTTATGGCCAAAGACAATGTTCCCTTCCATAGCTTAGTCTTCTTCTGCTCAG
CCCTAGGAGCTGAGGATAACTATACCTTGGTTCAGCCACCTCATTGCTACAGAGTACCTGAACTATGAGGATGGGA
AATTCTCTAAGAGCCGCGGTGTGGGAGTGTGGGGACATGGCCAGGACACGGGGATCCCTGCTGACATCTGGC
GCTTCTATCTGCTGTACATTTCGGCCTGAGGGCCAGGACAGTGCTTTCTCCTGGACGGACCTGCTGCTGAAGAATA
ATTCTGAGCTGCTTAACAACCTGGGCAACTTCATCAACAGAGCTGGGATGTTTGTGTCTAAGTTCTTTGGGGGCT
ATGTGCCTGAGATGGTGTACCCCTGATGATCAGCGCCTGCTGGCCCATGTACCCCTGGAGCTCCAGCACTATC
ACCAGCTACTTGAGAAGGTTTCGGATCCGGGATGCCTTGCAGTATCCTCACCATATCTCGACATGGCAACCAAT
ATATTCAGGTGAATGAGCCCTGGAAGCGGATTAAAGGCAGTGGGCTGACAGGCAACGGGCAGGAACAGTACTG
GCTTGGCAGTGAATATAGCTGCCTTGCTCTCTGTGTCATGCTTACGCTTACATGCCACGGTTAGTGCCACAATCC
AGGCCCAGCTGCAGCTCCACCTCCAGCCTGCAGTATCCTGCTGACAACTTCTGTGTACCTTACCAGCAGGAC
ACCAGATTGGCACAGTCACTCCCTTGTTCAAAAATTGGAAAATGACCAGATTGAAAGTTTAAGGCAGCGCTTTG
GAGGGGGCCAGGCAAAAACGTCCCCGAAGCCAGCAGTTGTAGAGACTGTTACAACAGCCAAGCCACAGCAGATAC
AAGCGCTGATGGATGAAGTGACAAAACAAGGAAACATTGTCCGAGAACTGAAAGCACAAAAGGCAGACAAGAACG
AGGTTGCTGCGGAGGTGGCGAACTCTTGATCTAAAGAAACAGTTGGCTGTAGCTGAGGGGAAACCCCTGAAG
CCCCTAAAGGCAAGAAGAAAAAGTAAAGACCTTGGCTCATAGAAAGTCACTTTAATAGATAGGGACAGTAATAA
ATAAATGTACAATCTCTATA

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FIGURE 123

MRLFVSDGVPGLPVLAAAGRARGRAEVLISTVGPEDCVVPFLTRPKVPVLQLDSGNYLFSTSAICRYFFLLSGW
EQDDLTNQWLEWEATELQPALSAALYYLVVQGKKGEDVLGSVRRALHIDHSLSRQNCPLAGETESLADIVLWG
ALYPLLQDPAYLPEELSALHSWFQTLSTQEPQCQRAAETVLKQQGVLAALRPYLQKQPQPSPAEGRAVTNEPEEEEL
ATLSEEEIAMAVTAWEKGLSLEPLRPQQNPVLPVAGERNVLITSALPYVNNVPHLGNIIGCVLSADVFARYSRL
RQWNTLYLCGTDEYGTATETKALEEGLTPQEICDKYHIIHADIYRWFNISFDIFGRITTPQQTKITQDIFQQLLK
RGFVLQDTVEQLRCEHCARFLADRFVEGVCPFCGYEEARGDQCDKCGKLINAVELKKPQCKVCRSCPVVQSSQHL
FLDLPKLEKRLEEWLGRTLPGSDWTPNAQFITRSWLRDGLKPRCITRDLKWGTPVPLEGFEDKVFYVWFDAITIGY
LSITANYTDQWERWWKNPEQVDLYQFMAKDNVPFHSLVFPSCALGAEDNYTLVSHLIATEYLNIEDGKFSKSRGV
GVFGDMAQDTGIPADIWRFYLLYIRPEGQDSAFSWTDLLLKNNSSELLNNLGNFINRAGMFVSKFFGGYVPEMVL
PDDQRLLAHVLTLELQHYHQLLEKVRIRDALRSILTISRHGNQYIQVNEPWKRIKGSEADRQRAGTVTGLAVNIAA
LLSVMLQPYMPTVSATIQAQLQLPPPACSIILLTNFLCTLPAGHQIGTVSPLFQKLENDQIESLRQRFGGGQAKTS
PKPAVVETVTTAKPQQIQALMDEVTKQGNIVRELKAQKADKNEVAAEVAKLLDLKKQLAVAEGKPPEAPKGGKKK

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FIGURE 124

ATTTCGAACCCCGTCGCGCCCTTTGTGCGCTCACGGGTGGCGGGCGCGGGAAGGGGATTTGGATTGTTGCGCCTCT
GCTCTGAAGAAAGTGCTGTCTGGCTCCAACTCCAGTTCTTTCCCTGAGCAGCGCTGGAACCTAACCTTCCCA
CTCTGTCACTTCTCGATCCCGCCGGCGCTTTAGAGCCGAGTCCAGTCTTGGATCCTTCAGAGCCTCAGCCACT
AGCTGCGATGTCATGTGATCAAGCGAGATGGCCGCCAAGAACGAGTCATGTTTGACAAAATTACATCTCGAATCCA
GAAGCTTTGTTATGGACTCAATATGGATTTTGTGTTGATCCTGCTCAGATCACCATGAAAGTAATCCAAGGCTTGTA
CAGTGGGGTCACCACAGTGGAACTAGATACTTTGGCTGCTGAAACAGCTGCAACCTTGACTACTAAGCACCTTGA
CTATGCTATCCTGGCAGCCAGGATCGCTGTCTCTAACTTGCAAAAGAAACAAAGAAAGTGTTCAGTGATGTGAT
GGAAGACCTCTATAACTACATAAATCCACATAATGGCAAACACTCTCCCATGGTGGCCAAGTCAACATTGGATA
TGTTCTGGCCAATAAAGATCGCCTGAATTCTGCTATTATCTATGACCGAGATTTCTCTTACAATTACTTCGGCTT
TAAGACGCTAGAGCGGTCTTATTTGTTGAAGATCAATGAAAAAGTGGCTGAAAGACCACAACATATGTTGATGAG
AGTATCTGTTGGGATCCACAAAGAAGACATTGATGCAGCAATTGAAACATATAATCTTCTTTCTGAGAGGTGGTT
TAJTCATGCTTCGCCCACTCTCTTCAATGCTGGTACCAACCGCCCACTTTCTAGCTGTTTTCTTCTGAGTAT
GAAAGATGACAGCATTGAAGGCATTTATGACACTCTAAAGCAATGTGCATTGATTTCTAAGTCTGCTGGAGGAAT
TGGTGTGCTGTGAGTTGATTTCGGGCTACTGGCAGCTACATTGCTGGGACTAATGGCAATTCCAATGGCCTTGT
ACCGATGCTGAGAGTATATAACAACACAGCTAGATATGTGGATCAAGGTGGGAACAAGCGTCTTGGGGCATTTC
TATTTACCTGGAGCCTTGGCATTTAGACATCTTTGAATTCCTTGATTTAAAGAAGAACACAGGAAAGGAAGAGCA
GCGTGCCAGAGATCTTTTCTTTGCTCTTTGGATTCCGGATCTCTTCATGAAACGAGTGGAGACTAATCAGGACTG
GTCTTTGATGTGTCCAAATGAGTGTCTTGGTCTGGATGAGGTTTGGGGAGAGGAATTTGAGAACTATATGCAAG
TTATGAGAAAACAAGGTCGTGTCCGCAAAGTTGTAAGGCTCAGCAGCTTTGGTATGCCATCATTGAGTCTCAGAC
GGAAACAGGCACCCCGTATATGCTCTACAAAGATTCTGTAATCGAAAGAGCAACCAGCAGAACCTGGGAACCAT
CAAATGCAGCAACCTGTGCACAGAAATAGTGGAGTACACCAGCAAAGATGAGGTTGCTGTTTGTAATTTGGCTTC
CCTGGCCCTGAATATGTATGTACATCAGAACACACATACGACTTTAAGAAGTTGGCTGAAGTCACATAAGTCTGT
TGTCGGAAACTTGAATAAAATTATTGATATAAACTACTATCCTGTACCAGAGGCATGCCATCAAATAAACGCCA
TCGCCCCATTGGAATTGGGGTACAAGGTCTGGCAGATGCTTTTATCCTGATGAGATACCCTTTTGAGAGTGCAGA
AGCCCAGTTACTGAATAAGCAGATCTTTGAAACTATTTATTATGGTGCCTCTGGAAGCCAGCTGTGACCTTGCCAA
GGAGCAGGGCCCATACGAAACCTATGAGGGCTCTCCAGTTAGCAAAGGAATTCTTCAGTATGATATGTGGAATGT
TACTCCTACAGACCTATGGGACTGGAAGGTTCTCAAGGAGAAGATTGCAAAGTATGGTATAAGAAACAGTTTACT
TATTGCCCCGATGCCATCAGCTTCCACTGCTCAGATCCTGGGGAATAATGAGTCCATTGAACCTTACACCAGCAA
CATCTATACTCGCAGAGTCTTGTGAGGAGAATTTAGATTGTAAATCCTCACTTATTGAAAGATCTTACCGAGCG
GGGCCTATGGCATGAAGAGATGAAAACCAGATTATTGCATGCAATGGCTCTATTTCAGAGCATAACCAGAAATTC
TGATGACCTGAAGCAACTTTATAAACTGTGTGGGAAATCTCTCAGAAAACCTGTCTCAAGATGGCAGCTGAGAG
AGGTGCTTTTATTGATCAAAGCCAATCTTTGAACATCCACATTGCTGAGCCTAACTATGGCAAACCTACTAGTAT
GCACTTCTACGGCTGGAAGCAGGGTTTGAAGACTGGGATGTATTATTTAAGGACAAGACCAGCAGCTAATCCAAT
CCAGTTCACTCTAAATAAGGAGAAGCTAAAAGATAAAGAAAAGGTATCAAAGAGGAAGAAGAGAAGGAGAGGAA
CACAGCAGCCATGGTGTGCTCTTTGGAGAATAGAGATGAATGTCTGATGTGTGGATCCTTGAGGAAAGACTTGGA
GAGACCAGCATGTCTTCAGTAGCCAACTACTTCTTGAGCATAGATAGGTATAGTGGGTTTGTCTTGAGGTGGTAA
GGCTTTGCTGGACCTGTGTCAGGCAAAAGGAGTAATTGATTTAAAGTACTGTTAATGATGTTAATGATTTTTTT
TTAAACTCATATATTGGGATTTTACCAAAATAATGCTTTTGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG
TCAAAGTAGAAGTTTTAGGAATGCAAAATAAGTCATCTTGATACAGGGAGTGGTTAAGTAAGGTTTCATCACC
ATTTAGCATGCTTTTCTGAAGACTTCAGTTTTGTTAAGGAGATTTAGTTTTACTGCTTTGACTGGTGGGTCTCTA
GAAGCAAACTGAGTGATAACTCATGAGAAGTACTGATAGGACCTTTATCTGGATATGGTCTATAGGTTATTCT
GAAATAAAGATAAACATTTCTAAGTGAAAAA

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FIGURE 125

MHVIKRDGRQERV MF DKITSRIQKLCYGLNMD FVDPAQITMKV IQGLYSGVTTVELDTLAAETAATLT TKHPDYA
ILAARIAVSNLHKETKKVFS DVMEDLYNYINPHNGKHSPMVAKSTLDIVLANKDRLNSAIIYDRDFS YNYFGFKT
LERSYLLKINGKVAERPQHMLMRVSVGIHKEDIDAAIETYNLLSERWFTHASPTL FNAGTNRPQLSSCFLLSMKD
DSIEGIYDTLKQCALISKSAGGIGVAVSCIRATGSYIAGTNGNSNGLVPMLRVYNNTARYVDQGGNKRPGAF AIY
LEPWHL DIFEFLDLKKN TGKEEQ RARDLFFALWIPDLFMKRVETNQDWSLMCPNECPGLDEVWGEEFEKLYASYE
KQGRVRKV VKAQQLWYAIIESQTETGTPYMLYKDCNRKSNQQNLGTIKCSNLCTEIVEYTSKDEVAVCNLASLA
LNMYVTSEHTYDFKKLAEVTKVVVRNLNKIIDINYYPVPEACLSNKRHRPIGIGVQGLADAFILMRYPFESAEAQ
LLNKQIFETIYYGALEASCDLAKEQGPYETIEGSPVSKGILQYDMWNVTPDLDWDWKVLKEKIAKYGIRNSLLIA
PMPTASTAQILGNNE SIEPYTSNIYTRRVLSGEFQIVNPHLLKDLTERGLWHEEMKNQIIACNGSIQSIPEIPDD
LKQLYKTVWEISQKTVLKMAAERGAFIDQSQSLNIHIAEPNYGKLTSMHFYGWKQGLKTGMYYLRTRPAANPIQF
TLNKEKLKDKEKVSKEEEEKERNTAAMVCSLENRDECLMCGS

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FIGURE 126

TCTGGGCGCGCGGACGTCAGTTTGAGTTCTGTGTTCTCCCGCCCCGTGTCCCGCCCGACCCGCGCCCCGCGATGC
TGGCGCTGCGCTGCGGCTCCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCTCTTCTCTCTCTCCGGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGTGAGCTGAAGGCAGATGTCTGTCCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACTGAAGCACGTGGGGCCAGGTGTCTGTCCATGGCTAATGCTGGTCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCCGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGCTAACTCTGTGGCCAGGGTGTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTGAGCCAAAGGTGCCGTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCCTAATAACCCACCCTTCCTCACGACCTCA
TTTCTGGGCATCTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTTGCCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAGGACTCTAATACCTGTTTAATATTGTCTTCCTAATTGGGATAATTTAATTAACAAGATTGA
CTAGAAGTGAACTGCAACACTAATTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGTAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCTGTGTTGCTAACAGAAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCTGCTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 127

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

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FIGURE 128

TCTGGGCGCGCGCGACGTCAGTTTGAGTTCTGTGTTCTCCCCGCCCGTGTCCCGCCCGACCCGCGCCCGCGATGC
TGGCGCTGCGCTGCGGCTCCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCTTCTCTCTCTCCCGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGTGGAGCTGAAGGCAGATGTCTGCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCCGGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGCTTAAATCTGTGGCCAGGGTGTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTGAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCCTAATACCCACCCCTTCCTCACGACCTCA
TTTCTGGGCATCTTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTCTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTGGCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAAGGACTCTAATACCTGTTTAAATATTGTCTTCCCTAATTGGGATAATTTAATTAAACAGATTGA
CTAGAAGTGAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGTAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCATTGAGCTGTGCCTAGACAAATGTGAATTCCGTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAAA
AAAAAAAAAAAAAAAA

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FIGURE 129

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

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FIGURE 130

CGGCGGAGCTGGTCCCGTTGTGCTGCGGCGCCGCGCGGCCTGCAGTCCCGGGCCCGCGCCCCGCGCCGCCCCGCCC
GCCCCGCCATGGAGCCCCGGCCCCGACGGCCCCGCGCCCTCCGGCCCCGCGGCCATCCGCGAGGGCTGGTTCCGCGA
GACCTGCAGCCTGTGGCCCGGCCAGGCCCTGTGCTGCAGGTGGAGCAGCTGCTCCACCACCGGCGCTCGCGCTA
CCAGGACATCCTCGTCTTCCGCAGTAAGACCTATGGCAACGTGCTGGTGGTGGACGGTGTCTATCCAGTGCACGGA
GAGAGACGAGTTCTCCTACCAGGAGATGATCGCCAACCTGCCTCTCTGCAGCCACCCCAACCCGCGAAAGGTGCT
GATCATCGGGGGCGGAGATGGAGGTGTCTGCGGGAGGTGGTGAAGCACCCCTCCGTGGAGTCCGTGGTCCAGTG
TGAGATCGACGAGGATGTCTATCCAAGTCTCCAAGAAGTTCTGCCAGGCATGGCCATTGGCTACTCTAGCTCGAA
GGTGACCCTACATGTGGGTGACGGTTTTGAGTTTCATGAAACAGAAATCAGGATGCCTTCGACGTGATCATCACTGA
CTCCTCAGACCCCATGGGCCCCGCGAAAGTCTCTTCAAGGAGTCTATTACCAGCTCATGAAGACAGCCCTCAA
GGAAGATGGTGTCTCTGCTGCCAGGGCGAGTGCAGTGGCTGCACCTGGACCTCATCAAGGAGATGCGGCAGTT
CTGCCAGTCCCTGTTCCCCGTGGTGGCCTATGCCTACTGCACCATCCCCACCTACCCACGCGCCAGATCGGCCTT
CATGCTGTGCAGCAAGAACCCGAGCACGAACCTCCAGGAGCCGGTGCAGCCGCTGACACAGCAGCAGGTGGCGCA
GATGCAGCTGAAGTACTACAACCTCCGACGTGCACCGCGCCGCGCTTTGTGCTGCCCGAGTTTGCCCGCAAGGCCCT
GAATGATGTGAGCTTGAGCCCCAGGCGCCACCACTGATGCCACCCAGGACCTCGGACCTTGAGGCCTGCGGGGTGCC
TCGGCCCCCTCCAGCCCCGGGCGGACCTCCTGCTGGCTCTCGCCCAACCAAGTGTTACAAGCCCCAGAATGC
TGCCCGGCCTGCCCTGCTGGGCGGACTGTCTGTGTGTCTGTCTCTCTGGCGTTCCACCTCCAAGCCTATACCAGC
TGTGTACAGCGCCATCTCTCTGCCTTCTGTTGCCCCCG

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FIGURE 131

MEPGPDGPAASGPAAIREGWFRETC SLWPGQALS LQVEQL LHRRSRYQDILVFRSKTYGNVLVLDGVIQCTERD
EFSYQEMIANLPLCSHPNPRKVLII GGGDGGVLREVVKHPSVESVQCEIDEDVIQVSKKFLPGMAIGYSSSKVT
LHVGDGFEFMKQNQDAFDVII TDSSDPMGPAESLFKESYYQLMKTALKEDGVLCCQGECEWLHLDLIKEMRQFCQ
SLFPVVAYAYCTIPTYP SGQIGFMLCSKNPSTNFQEPVQPLTQQQVAQMQLKYNSDVHRAAFVLPEFARKALND
VS

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FIGURE 132

GCGCTCCGGGCCTGGAATCCCTACGCGTCCCTTTGGGTTTAGCACGATGAGCTCAATCGGCACTGGGTATGACCT
GTCAGCCTCTACATTCTCTCCTGACGGAAGAGTTTTTCAAGTTGAATATGCTATGAAGGCTGTGGAAAAATAGTAG
TACAGCTATTGGAATCAGATGCAAAGATGGTGTGTCTTTGGGGTAGAAAAATTAGTCCTTTCTAAACTTTATGA
AGAAGGTTCCAACAAAAGACTTTTTTAATGTTGATCGGCATGTTGGAATGGCAGTAGCAGGTTTGTGGCAGATGC
TCGTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAACCTTCAGATCTAACTTTGGCTACAACATTCCACTAAA
ACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATACACTCTACAGTGCTGTTAGACCTTTTGGCTGCAG
TTTCATGTTAGGGTCTTACAGTGTGAATGACGGTGCGCAACTCTACATGATTGACCCATCAGGTGTTTCATACGG
TTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAAAGACGGAAATAGAGAAGCTTCAGATGAAAGAAAT
GACCTGCCGTGATATCGTTAAAGAAGTTGCAAAAATAATTTACATAGTACATGACGAAGTTAAGGATAAAGCTTT
TGAAGTAGAACTCAGCTGGGTTGGTGAATTAATAATGGAAGACATGAAATTGTTCCAAAAGATATAAGAGAAGA
AGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATGAATCAGATGATGATAATATGTAAACATTTACTCCA
GCATCTATTGTATTTTAAATTTCTACTCCAGTCCAATGTAAGTATTTAGCCCTGGATTATACATACTGTCCAATT
TTCATTAAATTTTTGTCTTATAACTATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 133

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENTSSTAIGIRCKDGVVFGVEKLVLSKLYEEGSNKRLFNVD RHVG
MAVAGLLADARSLADIAREEASNFRSNGYNIPLKHLADRVAMYVHAYTLYSAVRPFGCSFMLGSYSVNDGAQLY
MIDPSGVSYGYWGCAIGKARQAAKTEIEKLQMKEMTCRDIVKEVAKIIYIVHDEVKDKAFELELSWVGELTNGRH
EIVPKDIREEAKEYAKESLKEEDESDDDNM

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FIGURE 134

CGGCACGAGGCGACTTTGGTGGAGGTAGTTCTTTGGCAGCGGGC**ATG**CGGGTACCGTGGTGCTGGACGATGTGG
AGCTGCGGGAGGCTCAGAGAGATTACCTGGACTTCCTGGACGACGAGGAAGACCAGGGAATTTATCAGAGCAAAG
TTCGGGAGCTGATCAGTGACAACCAATACCGGCTGATTGTCAATGTGAATGACCTGCGCAGGAAAAACGAGAAGA
GGGCTAACCGGCTTCTGAACAATGCCTTTGAGGAGCTGGTTGCCTTCCAGCGGGCCTTAAAGGATTTTGTGGCCT
CCATTGATGCTACCTATGCCAAGCAGTATGAGGAGTTCTACGTAGGACTGGAAGGCAGCTTTGGCTCCAAGCACG
TCTCCCGCGGACTCTTACCTCCTGCTTCCTCAGCTGTGTGGTCTGTGTGGAGGGCATTGTCTACTAAATGTTCTC
TAGTTTCGTCCCAAAGTCGTCCGAGTGTCCTACTGTCTGCTACTAAGAAGACCATAGAGCGACGTTATTCTG
ATCTCACCACCCTGGTGGCCTTTCCCTCCAGCTCTGTCTATCCTACCAAGGATGAGGAGAACAATCCCCTTGAGA
CAGAATATGGCCTTTCTGTCTACAAGGATCACCAGACCATCACCATCCAGGAGATGCCGAGAAGGCCCCAGCCG
GCCAGCTCCCCGCTCTGTGGACGTCATTCTGGATGATGACTTGGTGGATAAAGCGAAGCCTGGTGACCGGGTTC
AGGTGGTGGGAACCTACCGTTGCCTTCCTGGAAAGAAGGGAGGCTACACCTCTGGGACCTTCAGGACTGTCTGTA
TTGCCTGTAATGTTAAGCAGATGAGCAAGGATGCTCAGCCCTCTTTCTCTGCTGAGGATATAGCCAAGATCAAGA
AGTTCAGTAAAACCCGATCCAAGGATATCTTTGACCAGCTGGCCAAGTCATTGGCCCCAAGTATCCATGGGCATG
ACTATGTCAAGAAAGCAATCCTCTGCTTGCTCTTGGGAGGGGTGGAACGAGACCTAGAAAATGGCAGCCACATCC
GTGGGGACATCAATATTCTTCTAATAGGAGACCCATCCGTTGCCAAGTCTCAGCTTCTGCGGTATGTGCTTTGCA
CTGCACCCCGAGCTATCCCCACCACTGGCCGGGGCTCCTCTGGAGTGGGTCTGACGGCTGCTGTCAACCACAGACC
AGGAAACAGGAGAGCGCCGTCTGGAAGCAGGGGCCATGGTCTGGCTGACCGAGGCGTGGTTTGCAATTGATGAAT
TTGACAAAATGTCTGACATGGATCGCACAGCCATCCATGAAGTGATGGAGCAGGGTCGAGTGACCATTGCCAAGG
CTGGCATCCATGCTCGGCTGAATGCCCGCTGCAGTGTTTTGGCAGCTGCCAACCTGTCTACGGCAGGTATGACC
AGTATAAGACTCCAATGGAGAACATTGGGCTACAGGACTCACTGTCTGTCACGATTTGACTTGCTCTTCATCATGC
TGGATCAGATGGATCCTGAGCAGGATCGGGAGATCTCAGACCATGTCTTCGGATGCACCGTTACAGAGCACCTG
GGGAGCAGGATGGCGATGCTATGCCCTTGGGTAGTGCTGTGGATATCCTGGCCACAGATGATCCCAACTTTAGCC
AGGAAGATCAGCAGGACACCCAGATTTATGAGAAGCATGACAACCTTCTACATGGGACCAAGAAGAAAAAGGAGA
AGATGGTGAGTGCAGCATTTCATGAAGAAGTACATCCATGTGGCCAAAATCATCAAGCCTGTCTGACACAGGAGT
CGGCCACCTACATTGCAGAAGAGTATTCACGCCTGCGCAGCCAGGATAGCATGAGCTCAGACACCGCCAGGACAT
CTCCAGTTACAGCCCGAACACTGGAACTCTGATTCGACTGGCCACAGCCCATGCGAAGGCCCGCATGAGCAAGA
CTGTGGACCTGCAGGATGCAGAGGAAGCTGTGGAGTTGGTCCAGTATGCTTACTTTAAGAAGGTTCTGGAGAAGG
AGAAGAAACGTAAGAAGCGAAGTGAGGATGAATCAGAGACAGAAGATGAAGAGGAGAAAAGCCAAGAGGACCAGG
AGCAGAAGAGGAAGAGAAGGAAGACTCGCCAGCCAGATGCCAAAGATGGGGATTCTACGACCCCTATGACTTCA
GTGACACAGAGGAGGAAATGCCTCAAGTACACACTCCAAAGACGGCAGACTCACAGGAGACCAAGGAATCCCAGA
AAGTGGAGTTGAGTGAATCCAGGTTGAAGGCATTCAAGGTGGCCCTCTTGATGTGTTCCGGGAAGCTCATGCGC
AGTCAATCGGCATGAATCGCCTCACAGAATCCATCAACCGGACAGCGAAGAGCCCTTCTCTTCAGTTGAGATCC
AGGCTGCTCTGAGCAAGATGCAGGATGACAATCAGGTCATGGTGTCTGAGGGCATCATCTTCCTCATCT**AGAGGAG**
GCCTCGTCTCTGAAGTTGGGTTGTGCCGAGAGAGTTTGTCTGTGTTCCACCCCTCTCCCTGACCCAAGTCTTT
GCCTCTACTCCCTTAACAGTGTTGAATTCAACTGAAGCGAGGAATGTTGGTGATGAAGCTGAGTTCAGGACTCG
GTGGACCCCTTTGGGAATGGGTCTATGAAAGCTGCCATGGGGTGAGGAAAGAGGAGACAGTGGGAGAGGACAATGAC
TATTGCATCTTCATTGCAAAAGCACTGGCTCATCCGCCCTACTTCCCATCCCACACAAACCAATTGTAAATAAC
ATATGACTTCTGAGTACTTTTGGGGGCACAACCTGTTTTCTGTTTGCTGTTTTTTTGTGTTTTTTTCTCCAG
AGCACTTTGGTCTAGACTAGGCTTTGGGTGTTTCCAATTGGTGGAGAGAAGCTCTGAGGCACGTCATGCAGGTCA
AGAAAGCTTTCTTTGCAGTAGCACCAGTTAAGGTGAATATGTATTGTATCACAAAACAAACCCAATATCCAGATG
AATATCCGAGATGTTGAATAAACTTAGCCATTTCTGTACAAAAAAGGGGGGGCCCGGTAAAC

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FIGURE 135

MAGTVVLDDVELREAQRDYLDLDEEDQGIYQSKVRELI SDNQYRLIVNVNDLRRKNEKRANRLLNNAFEELVA
FQRALKDFVASIDATYAKQYEEFYVGLGSGFGSKHVSPTLTSCFLSCVVCVEGIVTKCSLVRPKVVRVSVHYCPA
TKKTIERRYSDLTTLVAFPSSSVYPTKDEENNPLETEYGLSVYKDHQTITITIQEMPEKAPAGQLPRSVDVILDDDL
VDKAKPGDRVQVVGTYRCLPGKKGGYTSGTFRVLIACNVKQMSKDAQPSFSAEDIAKIKKFSKTRSKDIFDQLA
KSLAPSIHGHYVKKAILCLLLGGVERDLENGSHIRGDINILLIGDPSVAKSQLLRYVLCTAPRAIPTTGRGSSG
VGLTAAVTTDQETGERRLEAGAMVLADRGVVCIDFDMKSDMDRTAIHEVMEQGRVTIAKAGIHARLNARCSVLA
AANFVYGRYDQYKTPMENIGLQDSLRSRFDLLFIMLDQMDPEQDREISDHVLRMHRYRAPGEQDGDAMPLGSAVD
ILATDDPNFSQEDQQDTQIYEKHDNLLHGTKKKKEKMSAAFMKKYIHVAKI IKPVLTTQESATYIAEEYSRLRSQ
DSMSSDTARTSPVTARTLETILRLATAHAKARMSKTVDLQDAEEAVELVQYAYFKKVLEKEKKRKRSEDESETE
DEEEKSQEDQEQRKRKRKTRQPDAGDGSYDPYDFSDTEEMPQVHTPKTADSQETKESQKVELSESRLKAFKVA
LLDVFREAHQAQSIGMNRLTESINRDSEEPFSSVEIQAAALSKMQDDNQVMVSEGIIFLI

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FIGURE 136

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG
GAAGGAACCATGGCCAACTGTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGGTCTTGTGGGA
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGTCTGAAATTCATGCAAGCTTCCGAAGATCTT
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCCGAGTCATGCTCGGGGAGACCAACCCTGCA
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTTGGTTTTACCCTGAGGAACCTGGTAGATTACACGAGCTGTGCTCAG
AACTGGATCTATGAATTGACAGGAGGGCAGACCACATTGCTTTTACATCCATTTCCCCCTCCTTCCCATGGGCAGA
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACCTTCATCATAATTTGGAGGGAAGCTCTTGAGCTGTGAG
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAAATGCTTCCTCCCAGC

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FIGURE 137

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHS GPVVA
MVWEGLVVVKIGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSCAQNWI
YE

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FIGURE 138A

GGCTCATAGAGCTGAACAGTTGCAGGATGCGGAGGAGGAAAAAGATGATTCAAATGAAGAAGAAAACAAAGACAG
CCTTGTAGATGATGAAGAAGAGAAAAGAAGATCTTGGCGATGAGGATGAAGCAGAGGAAGAAGAGGAGGAGGACAA
CTTGGCTGCTGGTGTGGATGAGGAGAGAAGTGAGGCCAATGATCAGGGGCCCCCAGGAGAGGACGGTGTGACCCG
GGAGGAAGTAGAGCCTGAGGAGGCTGAAGAAGGCATCTCTGAGCAACCCTGCCCAGCTGACACAGAGGTGGTGGGA
AGACTCCTTGAGGCAGCGTAAAAAGTCAGCATGCTGACAAGGGACTGTAGATTTAATGATGCGTTTTCAAGAATAC
ACACCAAAACAATATGTCAGCTTCCCTTTGGCCTGCAGTTTGTACCAAATCCTTAATTTTTCCTGAATGAGCAAG
CTTCTCTTAAAAGATGCTCTCTAGTCATTTGGTCTCATGGCAGTAAGCCTCATGTATACTAAGGAGAGTCTTCCA
GGTGTGACAATCAGGATATAGAAAAACAAACGTAAGTGTGGGATCTGTTTGGAGACTGGGATGGGAACAAGTTCA
TTTACTTAGGGGTGAGAGAGTCTCGACCAGAGGAGGCCATTCCCAGTCCTAATCAGCACCTTCCAGAGACAAGGC
TGCAGGCCCTGTGAAATGAAAGCCAAGCAGGAGCCTTGGCTCCTGAGCATCCCCAAAGTGTAACGTAGAAGCCTT
GCATCCTTTTTCTTGTGTAAAGTATTTATTTTTTGTCAAATTCAGGAAACATCAGGCACCACAGTGCATGAAAAAT
CTTTCACAGCTAGAAATTGAAAGGGCCTTGGGTATAGAGAGCAGCTCAGAAGTCATCCAGCCCTCTGAATCTCC
TGIGCTATGTTTTATTTCTTACCTTTAATTTTTCCAGCATTTCACCATGGGCATTGAGGCTCTCCACACTCTTC
ACTATTATCTCTTGGTCAGAGGACTCCAATAACAGCCAGGTTTACATGAACTGTGTTTGTTCATTCTGACCTAAG
GGGTTTAGATAATCAGTAACCATAACCCCTGAAGCTGTGACTGCCAAACATCTCAAATGAAATGTTGTGGCCATC
AGAGACTCAAAGGAAGTAAGGATTTTACAAGACAGATTAAAAAAAATGGTTTTGTCCAAAAATATAGTTGTTGT
TGATTTTTTTTTTAAGTTTTCTAAGCAATATTTTTCAAGCCAGAAGTCCTCTAAGTCTTGCCAGTACAAGGTAGTC
TTGTGAAGAAAAGTTGAATACTGTTTTGTTTTCTATCTCAAGGGGTTCCTGGGTCTTGAAGTACTTTAATAATAA
CTAAAAAACCACTTCTGATTTTCTTCAGTGATGTGCTTTTGGTGAAAGAATTAATGAAGTCCAGTACCTGAAAG
TGAAAGATTTGATTTTGTTCATCTTCTGTAATCTTCCAAAGAATTATATCTTTGTAAATCTCTCAATACTCAA
CCTACTGTAAGTACCCAGGGAGGCTAATTTCCCTTAAAAAAAATCTATCCATCTACTTCTCTTACCTGAT
TTATGTGTTAGAATAAAATTCATGAAATTCGATTCCAAGCATACGAAAGATGCCTAAAGTTGATTCTATGCTCCTT
AGATCCAGACAGAATAATGAGTACAGGTTTATGAAATTCATAAAGTTTTCTGTCTCTTTAAAAAGGAACGTGCAG
TATATTTCTATCTGGCTGTTTAGATAACCCTTTCCTTGTATTAATTGTGAGCACGGAGCTCACTGGTGGGGGAGG
TTCTGAAACTCTCTGCCCTCCTGTGGTTGAATGAAGATGTTGCAAGACTTGACAAAGGAGGTTATCTTCTGAC
AGCATCAACTTTTAGAGATGGTTCTTTTTCTATCTTTCCAATTTCAGTTACTTGACAGTCTCCTTCCCCAGTATGCT
GAAGTTTGTGAAGAGTCACCAGTAATTGTGCTTTTCAGACAGTAGTGCAGCTTCAAATCGAGGCCATCACTGGG
CTGATGGGCTGGGAGAACCTTGCCATGTGCTGCTGTTTCTGCCCCCTTAGTCACTGCCCATTTCTGCCCCC
TTGGTCTGCTGACACACCTTCACCCAAAGTGCCATGGTTCTGATGGTGGCAGTTCCATCTCCCTGACATCAGGAAG
CTTTTCTCGATCAGAGCAGAGCGGGCCTGCTGCTGCTGTTTCTGATGGTGGCAGTTCCATCTCCCTGACATCAGGAAG
ACAGAGTTCTCAAAGAACAGTAAGTTCAGGTTTCAGAGGTATTATGGAATAAGAATGGTTTTCATAGTTTGGCTTTT
CTATATAATTCCTCCCTCTCAAAGTGAATATTCATTTTTTTAGTGGAGTATTTGACTAGAGAGAAGGTAAGGCA
GAAATACAGTCTACACTGGCTTTTAAAAATGTAAGCCAATTTCCAACCGGACCCCAAATAGTACAGGTTGAACA
TTCCGTTCCAACAATCCAAAACCCCAAATGCTCCAAAATCTTAACTTTGAGTTCCAGCATTCCGTCAGAAAGTGG
AAAATTTTACACCTGACCTCATTGACAGGTGGCAGTTACAGTGCAATCAAACCTTTGTTCCATGCCCAAGATTA
TTAAAAATATTGGATAAAATTACCTTCAAGCTATGTTGTATAAGGTGTATATAAAACAAATGAATTTTGTGTTTA
GACTTGGGTCTACTCCCAAGATACCTCATTATATATATACAAAAATCCCCAAATCCAAAAACATTTGAAACACTT
CTGGTCCCACACATTTTGGATAAGGGATATTTGACCTATATCTAATTATATAATAAGAAAAATGATTTTCTTTT
TTTTTTTTTTTTGAGATGGAGTTTCACTCTTGTGTGCGCCAGGCTGCAATGGCACAATCTTGGCTTACTACAA
CCTCCGCTCCCTAGTTCAAGGATTTCTCCTGCCTCAGCCTCCCAGGTAGCTGGGATTACAGGCATGTGCCACCA
TGCTTGGCTAATTTTGTATTTTGTAGTAGAGACGGGGTTTCGCCATGTTGGTTCAGACTGGTCTTGAAGTCTTGACC
TCAGGTGATCCGCCCGCCTCAGCCTCCCAACGTGCTGGGATTACAGGTGTGAGCCACCGTACCTGGCAGAAAATG
TACTTTCTTTCTCAGAAATCTTTTAAAAAAATTTGAAGGGTGAGGAGAAAAACATCTTGAGAGAAGAGGACCCAT
TAAACCTTTAAATATCTGTGGGAACCATTTTTTCTGATTTTCCCTTTTTTAACATCATGGCAAAGATGGGTTTTT
TTCCAACAAAATTTAATTTAATATCTTTCCACTTGAAGATTTTAGGTTTGTTCATACTTAATGAATATAAAA
CTAAAGGAGAAAAGCCAACCTGAAATAATTTAACTTTATATGAACATTTGATAAGAGTTTGTGGATTTTTCT
GTAGATAATATATTTGATCCAGAACTCAAGTGCATGGAAACATGATTTTGAATTTTTAAATCTAAAAAATAAA
AATTAATATCATGCTTCCCTCTATTGCAGTATCAGTTATTTAGTCACAGAATGGTATTTTATGTAAATTAAAT

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FIGURE 138B

AGGTGAATGCAATGCAGGTAAGTGGTTTTGGAATGGGAATGTGCAGTGCTTTATGTTTGGGGAGTTGGAGCAGGG
TATCTTTTCATCAATTAGAAGGAAAGTTTGAACTTCTGATTACCTTTATGTTGGTTTCTCTTATTATTTGTCTC
TTGCTAGATCTGCTAAACCAACCCAGCTTGCTCAGAGATCTCATATTGAAGCAACATACAGGCAATCCACATCTT
TCTTTCCCTTTGAAGTATAGTCATTGGATGGGATGAGGGACAGGGCCTGTTGGGTTTACAGGGCCTTGCACTGCA
TGGGCACATACTTAAAAGCTCTTGTCATGGAATCCCTGTCTGTTAGCCACAGGCCTCTTTAGCTCTATACATT
AAAATAACTACTGTAGTAGAAAATAGATAAGCTTCAGCTGAGTTGGCTTTTGATAGTGGAACAAAAACAAAATT
GACTTTTTATGGCCAAAATTCCTTGTTGACAGCTGTGATGTTCTAATATGATTTGGGAATATGTCAGTCTACAGA
ACCTGCATCCTGTAAAAACACCTTTGGGGTAGACGATAAAAGTCATTTTTAAGGCAAATACTTACCATGTGACTT
TTTATTACCAAATGCATCAGTAGTGAGCTGGTATGTTGTTTTCATAGGATGGAAACATTAGAAGTCCAGAGAAAA
ATAAATTTTTAAAAAAGGTGGAAAAGTTACGGCAAACCTGAGATTTTCAGCATAAAATCTTTAGTATGAAGTGAGA
GAAAGAAGAGGGAGGCTGGTTCTGTTGCTCGTATCAATAGGTTATCTGTGTCCCTCATCTTGGTGTACAGTGTT
ATTTCTGTCAGTATTATGAATATGTGGTTGACCCATCCTGTCAAATGTACCAACATTTTCGAAAGAATTCATTCA
AATCTCTTATGCCAACAGAAAAGTTCCTTCTTGTTTAATATCTCTTTACCTCAGTCCTACATTTTGATTCTCTGG
AGGAGATTTTAGCTTGTCTTAAAAAGCCAAATTTGGAGTCATCAAGCCTGCTGAACCTGATGGGGCAGCTTTTTG
AACAGCTTTCTGGAAGTAAGAACTTCAGTTGAAAAGCCCTTTGATCGCTTCAGCCCGGGACATGCCCTTCAGATG
GCTTATTCTCAGTAAAGCTTTATGTAGACTGTGACACTGTATATGTGTGACTCGTACAACCTTGACGTGTTTCTG
AAGTGGTTTAATCGTATTTGTTATTAGCTTCTTTGTGGAAATGCAATTTTTATACTAAAAACATTGCTTATTTGC
AATGCAATATGTTATAAATTTGTTGTTTATATTACTGGTATTAGTCTTAGCCTAATGAACCTAATTATTTTTCTT
TCTGTATTCTTTGCTTCCTCAAATAGCATCTGCAGCAATTGGAATGAGAAATCCAGATATGTGTTTCAAGTAGTA
CATTGCCTGAATCACAAATCACTTGATCACAGTATTGTATATAATCCCTGATCCTATTTGTTTCATTTTATTGTA
AATTCCCATTTGCATCAAAACCTAATGATAGTGATTGGTAAGTAAAAACAAATGGTGTATTGCTTTTCATACAAG
TGTTTTACAAAAGCCATTTGCCTAGGCAGCAAAAAATATTAATTTGTT

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FIGURE 139

CTGAAGATGGCGGCTGCTGTAGGACGGTTGCTCCGAGCGTCGGTTGCCCGACATGTGAGTGCCATTCCCTTGGGGC
ATTTCTGCCACTGCAGCCCTCAGGCCTGCTGCATGTGGAAGAACGAGCTTGACAAATTTATTGTGTTCTGGTTCC
AGTCAAGCAAAATTATTTCAGCACCAGTTCCCTCATGCCATGCACCTGCTGTCACCCAGCATGCACCCTATTTTAAG
GGTACAGCCGTTGTCAATGGAGAGTTCAAAGACCTAAGCCTTGATGACTTTAAGGGGAAATATTTGGTGCTTTTC
TTCTATCCTTTTGGATTTACCTTTGTGTGTCTTACAGAAATTGTTGCTTTTAGTGACAAAGCTAACGAATTTAC
GATGTGAAGTGTGAAGTTGTGCGAGTCTCAGTGGATTCCCACTTTAGCCATCTTGCCTGGATAAATACACCAAGA
AAGAATGGTGGTTTGGGCCACATGAACATCGCACTCTTGTGAGACTTAAGTAAGCAGATTTCCCGAGACTACGGT
GTGCTGTTAGAAGGTTCTGGTCTTGCACTAAGAGGTCTCTTCATAATTGACCCCAATGGAGTCATCAAGCATTG
AGCGTCAACGATCTCCAGTGGGCCGAAGCGTGGAAGAAACCTCCGCTTGGTGAAGGCGTTCCAGTATGTAGAA
ACACATGGAGAAGTCTGCCAGCGAAGTGGACACCGGATTCTCCTACGATCAAGCCAAGTCCAGCTGCTTCCAAA
GAGTACTTTCAGAAGGTAAATCAGTAGATCACCCATGTGTATCTGCACCTTCTCAACTGAGAGAAGAACCACAGT
TGAAACCTGCTTTTATCATTTTCAAGATGGTTATTTGTAGAAGGCAAGGAACCAATTATGCTTGTATTTCATAAGT
ATTACTCTAAATGTTTTGTTTTGTAAATCTGGCTAGGACCTTTTAAACATGGTTAGTTGCTAGTACAGGAATCG
TTTATTGGTAACATCTTGGTGGCTGGCTAGCTAGTTTCTACAGAACATAAATTGCTCTATAGAAGGCTATTCTT
AGATCATGTCTCAATGGAAACACTCTTCTTTCTTAGCCTTACTTGAATCTTGCCTATAATAAAGTAGAGCAACAC
ACATTGAAAGCTTCTGATCAACGGTCCTGAAATTTTCATCTTGAATGTCTTTGTATTAACTGAATTTTCTTTTA
AGCTAACAAAGATCATAATTTTCAATGATTAGCCGTGTAAGTCTGCAATGAATGTTTATGTGATTGAAGCAAAT
GTGAATCGTATTATTTTAAAAAGTGGCAGAGTGACTTAAGTATCATGATGATCCCTCATCCCTGAAATTGAGT
TTATGTAGTCATTTTACTTATTTTATTTCATTAGCTAACTTTGTCTATGTATTTTCTAGATATTGATTAGTGTA
TCGATTATAAAGGATATTTATCAAATCCAGGGATTGCATTTTGAATTTATAATTATTTTCTTTGCTGAAGTATTC
ATTGTAAACATACAAATAACATATTTAAACAAAAAAAAAAAA

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FIGURE 140

MAAAVGRLLRASVARHVSAIPWGISATAALRPAACGRTSLTNLLCSGSSQAKLFSTSSSCHAPAVTQHAPYFKGT
AVVNGEFKDLSLDDFKGKYLVLFFYP LDFTFVCPT EIVAFSDKANEFDVNCEVVAVSVDSHF SHLAWINTPRKN
GGLGHMNIALLSDLTKQISR DYGVLL EGSGLALRGLFIIDPNGVIK HLSVNDLPVGRSVEETLRLVKAFQYVETH
GEVCPANWTPDSPTIKPSPAASKEYFQKVNQ

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FIGURE 141

ACTTGGCCTTACACTCCGCTCGGCTCACCATGTGTCACTCTCGCAGCTGCCACCCGACCATGACCATCCTGCAGG
CCCCGACCCCGGGCCCCCTCCACCATCCCGGGACCCCGGCGGGGCTCCGGTCCTGAGATCTTCACCTTCGACCCTC
TCCCGGAGCCCGCAGCGGCCCTGCCGGGCGCCCCAGCGCCTCTCGCGGGCACCGAAAGCGCAGCCGCAGGGTCT
CTCTACCCCTCGAGTGGTGAGTATCGCCGAAGTGGGCATTTCGCGGTGTGCGCTGCCCTGGAGTCACTGGGGGAACGA
CCCGACTCCAGAGCCTCGACCTGACCTGTCTCCTGTTTTGTCTCCCTTAGTCCGGCGCCAGCTGCCAGTCGAGG
AACCGAACCCAGCCAAAAGGCTTCTCTTTCTGCTGCTCACCATCGTCTTCTGCCAGATCCTGATGGCTGAAGAGG
GTGTGCCGGCGCCCCTGCCTCCAGAGGACGCCCTAACGCCGCATCCCTGGCGCCACCCCTGTGTCCCCCGTCC
TCGAGCCCTTTAATCTGACTTCGGAGCCCTCGGACTACGCTCTGGACCTCAGCACTTTCCTCCAGCAACACCCGG
CCGCCTTCTTAACTGTGACTCCCCGCACTCCCCAAAAAGAATCCGAAAAACCACAAAGAAACACCAGGCGTACCTG
GTGCGCGAGAGCGTATCCCCAACTGGGACTTCCGAGGCAACTTGAACCTCAGAACACTACAGCGGAGACGCCACCC
GGTGCTTGAGGCGGGACCGAGGCGCACAGAGACCGAGGCGCATAGAGACCGAGGCACAGCCAGCTGGGCTAGGC
CGGTGGGAAGGAGAGCGTCGTTAATTTATTTCTTATTGCTCCTAATTAATATTTATATGTATTTATGTACGTCCT
CCTAGGTGATGGAGATGTGTACGTAATATTTATTTAACTTATGCAAGGGTGTGAGATGTTCCCTCTGCTGTAAA
TGCAGGTCTCTTGGTATTTATTGAGCTTTGTGGGACTGGTGGAAGCAGGACACCTGGAACCTGCGGCAAAGTAGGA
GAAGAAATGGGGAGGACTCGGGTGGGGGAGGACGTCCCGGCTGGGATGAAGTCTGGTGGTGGGTTCGTAAGTTTAG
GAGGTGACTGCATCCTCCAGCATCTCAACTCCGTCTGTCTACTGTGTGAGACTTCGGCGGACCATTAGGAATGAG
ATCCGTGAGATCCTTCCATCTTCTTGAAGTCGCCCTTtagGGTGGCTGCGAGGTAGAGGGTTGGGGTTGGTGGGC
TGTCACGGAGCGACTGTGAGATCGCCTAGTATGTTCTGTGAACACAAATAAAATTGATTTACTGTCTGC

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FIGURE 142

MCHSRSCHPTMTILQAPTPAPSTIPGPRRGSGPEIFTFDPLPEPAAAPAGRPSASRGHRKRSRRVSLPSSGEYRR
SGHSRCALPWSHWGTTRLQSLDLTCLLFCLPLVRRQLPVEEPNPAKRLFLLLTIVFCQILMAEEGVPAFLPPED
APNAASLAPTPVSPVLEPFNLTSEPSDYALDLSTFLQQHPAAF

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FIGURE 143A

ATGGCAGAAGGTGTGAATGAGCCTTGTTTCCCGGGGGACTGTGGCATATTTGTCACTAAAGTGGACAAAGGAAGC
ATTGCTGATGGCCGCTTAAGGGTCAATGACTGGCTGCTGAGAATCAACGATGTGGACCTCATCAACAAGGACAAG
AAGCAGGCCATCAAGGCGCTCCTCAATGGGGAGGGGGCCATCAACATGGTCGTGCGGCGGAGGAAGTCCCTGGGT
GGGAAGGTGGTCACGCCGCTGCACATCAACCTCAGTGGACAGAAAGACAGTGGCATCAGTCTGGAGAATGGAGTG
TATGCTGCCGCTGTGCTGCCTGGAAGCCCTGCCGCTAAAGAAGGGTCCCTTGCTGTGGGAGACAGGATCGTTGCG
ATCAATGGCATTGCACTGGACAACAAGTCTCTGAATGAATGTGAATCTCTGCTGCGGAGCTGCCAGGACTCCCTG
ACCCTGTCCCTCCTGAAGGTATTCCCTCAGAGCTCCTCGTGGAGTGGCCAGAACATTTTGTAAAATATCAAAGAC
TCTGATAAGATGCTGAGTTTTCGAGCCCATGGCCCGGAGGTCCAGGCTCATAACAAACGGAAC TTGATACAGCAC
AATAACTCCACGCAGACAGACATCTTCTACACGGACAGGCTGGAAGACAGGAAGGAGCCAGGCCCCCCAGGAGGC
AGCAGCTCCTTTCTGCATAAGCCATTCCCTGGGGGACCCCTTGCAAGTCTGCCCCAGGCCTGTCCAGTGCCTCT
GAGCGTAGCCTGAGCTCCTTCCGCTCAGATGCCTCTGGGGACCGTGGCTTTGGGCTGGTGGACGTGCGTGGCCGG
CGCCCACTGCTGCCCTTTGAGACCGAGGTGGGCCCCCTGTGGGGTTGGGGAGGCCCTCCCTGGACAAGGCAGACTCT
GAAGGCTCCAACAGCGGCGGGACCTGGCCCCAAGGCCATGCTCAGCTCCACGGCAGTGCCTGAGAAGCTCTCTGTT
TATAAAAAGCCAAAGCAAAGAAAGTCCATCTTTGACCCTAACACTTTCAAACGCCCCCAGACACCCCCAAAATA
GACTACCTGCTTCCAGGTCCTGGGCCTGCTCACTCTCCCCAGCCCTCCAAGAGGGCGGGGCCTCTGACACCCCCA
AAACCTCCCAGAAGGAGCGACTCCATTAAGTTCAGCACAGGCTGGAGACTAGTCCGAGTCAGAAGCCACTCTG
GTGGGCAGCTCCCCATCCACTAGTCCCCGAGCGCCCTGCCCCCTGACGTGGACCCCGGGGAGCCCATGCACGCA
TCACCCCTCGCAAGGCCAGGCTCCGATTGCTTCCAGCTACTACCCTGAAGGAGATGGGGACTCCTCCACCTG
CCGGCCAAGAAATCCTGTGATGAGGACCTCACCTCCAGAAGGTGGATGAGCTGGGGCAGAAGCGTCGCCGGCCA
AAATCTGCTCCAGTTTTTCGGCCGAAGCTTGCTCCAGTAGTGATTCTCTGCTCAGTTCTTGAGGAACAGAAGTGT
GTCCCGGCCAGTGGAGA ACTCTCCCCGAGCTCCAGGAGTGGGCACCTTACTCGCCTGGGCATTCCAGCCGGCAC
AGCAACCCCCCGCTATACCCTAGCAGGCCGTCTGTGGGTACTGTTCCCCGGAGTTTGACCCCCAGCACCCTGTG
AGCTCCATCCTGCGGAACCCCATCTACACTGTGCGCAGTCACAGGGTCGGCCCCCTGCAGCTCTCCACCTGCGGCC
CGAGATGCTGGCCCCCAGGGTTTGATCCCAAGTGTCCAGCACCAGGGGACGCCCTGAGCCTGGACCTGAGCCACAGG
ACCTGCAGCGACTACTCCGAGATGAGAGCCACCCATGGGTCCAACCTCACTGCCCTCCAGCGCCCGCCTGGGTTCT
TCGAGTAAC TTGAGTTCAAGGCGGAACGCATTAAATCCCATCAACACCAAGATATCCGCGGAGTGTCTGTTGGC
TCCGAGAGAGGTTCAAGTGTACATTCTGAATGCAGCACTCCTCCACAGTCACCCCTGAACATCGACACCCTGTCC
TCTTGTAGCCAGTCCCAGACCTCAGCCTCCACATTGCCAGAATCGCTGTCAACCCCGCGTCCCTCGGGGAGCGG
AGAAAGGACAGGCCTTATGTGGAGGAGCCACGCCACGTGAAGGTGCAGAAGGGCTCAGAGCCGCTGGGCATCTCC
ATCGTGAGTGGAGAGAAGGGCGGCATCTACGTCTCCAAGGTGACCGTGGGGAGCATCGCTCACCAGGCTGGCCTC
GAGTATGGGGATCAGTTACTGGAGTTCAACGGCATAAACCTGCGGAGCGCCACGGAGCAGCAGGCGCGGCTCATC
ATCGGGCAGCAGTGTGATACCATCACCATCCTGGCCAGTACAACCCCCACGTGCACCAGCTCAGCAGCCACTCC
CGGTCCAGCTCACACCTGGACCCTGCCGGTACCCACTCCACTCTCCAGGGCAGTGGCACCACCACCCCGGAGCAT
CCATCTGTATCGACCCACTGATGGAGCAGGACGAGGGGCCTAGCACCCCCCAGCCAAGCAGAGCAGCTCCAGG
ATTGCGGGAGATGCCAACAAGAAGACCCTGGAGCCACGCGTTGTCTTCATCAAAAAGTCCCAGCTGGAGCTTGGG
GTGCACTTGTGTGGTGGGAACCTGCATGGGGTGTGTTGTGGCCGAGGTGGAGGATGACAGTCTGCCAAGGGTCCT
GACGGCCTCGTGCCAGGGGACCTCATCCTGGAGTATGGCAGCCTGGACGTGCGGAACAAGACAGTGGAGGAAGTC
TATGTGGAGATGCTGAAGCCAGGGATGGCGTCCGCCTGAAGGTGCAGTACCGCCCTGAGGAGTTACGAAGGCC
AAGGGCTGCCTGGTGACAGCTTCTACATCAGGGCCCTGTACGACCGGCTGGCAGATGTGGAGCAAGAGTTGAGC
TTTAAAGAGGACGACATCCTCTACGTGGATGACACCTTACCCAGGGCACGTTCCGGGTCTGGATGGCTTGGCAG
CTGGACGAGAATGCCCAGAAGATCCAGCGCGGGCAGATTCCCAGCAAATATGTGATGGACCAAGAATTCTCCAGG
AGGCTCAGCATGTCTGAAGTCAAAGATGACAATAGCGCCACAAAAGACGCTGTCAGCGGCTGCACGCCGGTCCCTT
TTTCGGAGGAAACACAAGCACAAACGCAGCGGGTCCAAGGACGGGAAAGACCTGCTCGCCTTGGATGCCTTTTCC
AGTGA CTCCATTCCACTCTTTGAAGATTCCGGTGGAGCTGGCCTATCAGCGGGTCCAGAAGGTGGACTGCACCGCT
CTGAGGCCGTGCTGATTCTGGGGCCTTTGCTGGACGTGGTGAAGGAGATGCTGGTGAATGAGGCTCCTGGCAAG
TTCTGCAGATGTCCCTTGAGGTGATGAAGGCCTCCAGCAGGCCATTGAGCGGGGTGTCAAAGATTGCCTGTTT
GTCGACTATAAGCGGAGAAGCGGCCATTTTCGATGTGACCACTGTGGCGTCAATAAAGGAGATCACAGAAAAGAAC
CGACACTGCCTCCTGGACATTGCTCCGCACGCTATTGAGCGGCTCCACCACATGCACATCTACCCATTGTCTATC

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FIGURE 143B

TTCATCCACTACAAGAGCGCCAAGCACATCAAGGAGCAGAGAGACCCCATCTACCTGAGGGACAAGGTGACTCAG
AGGCATTCCAAAGAGCAGTTTGGAGCGGCGCAGAAGCTTGAGCAGGAGTACAGCAGGTACTTCACAGGGGTCATC
CAGGGAGGAGCCCTGTCAAGCATTGCACTCAGATCTTGGCAATGGTCAATCAAGAACAAAATAAAGTCCTGTGG
ATTCCAGCCTGCCCGCTCTAGGAGAATGCTGTGCTGTGGATGACTGCAGCTGGCCGCCTGAGGGGACGCCAGACT
CAGCTCTTTTCTAGCGACTGAAAGTAGAAGTCTGTCTGTCTATGAACATGCGGGGGAAGGATCCGGAACCAGGAC
CCAGAAGCACCTCCTTTGTAGACAGAGGGCCACGGCTGCGTGCGATCCAGGCCCAGGCCACACACTCTGCCCCGT
GTCACACGTGTGCTTTAACACAAAACAGATAACACTAAAGACGGGTTTCAGCACCCACCTTTCTTTAGCCAGCTGA
TCAGAGATGCTGCAAAGAGAACCTTTTCGGATCACTCGTTTACAAGCCTTTTCTAAGTATTTGGTGGTTTATGTTT
ACTTGAACGGCTCCATGTTGCCGGTGCCAGCCCCCTGTCCCCCTCTGTCAACCCCTGTGCGTTTGGTGGTTGGTTT
CGTTCCCGTCTTCAGCAAAACGACCTTGGAACCTCAATGGGGGCTGCTTTGCTTTGGGAGGTTCTTGTGGTGGG
ACCAGAGCTTTGACAAACCTCCTGCTCCTTGGTGGCACCTCTCCTGGAAGGACATCACAACCTCCAGGTGCTCAGA
CTGCCTGTGGCAGCAGAACCAGTGCCCTTGGCATTTCCTCCCAATGGGGAAGGTGACTTTGGCATTCTTACA
AACTCGTCTCTCGGCCCTTCTCCTGCCTTCCACAGCCTCTCGTTTCTCCTCCATCTGTGCTTATTACTTGAGG
ACTGTGTCTGCTCCGTGAGAGCTGCGTGGGCAGGGCTGCAGTGGGGTCCAGGTGGTGTTCAGCTGTGCTGATGCC
TGCCATTGGGTCCCTCCTTAGGCTCTGTAAGTCGTGACAGCCTTCATCAGTGCAATGTTTGCAGGGTAATTCTTAA
ACTTTTLAGAGGGTGGCAGGTACATCAGTTCTTTTTGATATGAAAACATTCATGTTTCAGACATTGAATTGAGAG
CTTTTAGGGGAAGCATAATGGTTATTGTCACTATCAACAGTCTAAAAAGAAAACTGAGGTCTTTTAACTTTGA
TTACAGCACTCACGGCATGCACCCTACTCAGTGTGGGTGTCTTCGTTTGGGGGCTTTTTTTTTTTTGCACCTTCT
GAGGCTAGATATGTCTGGCTGAAGATTTGATGTGGTTCCCTCCTTAAGCTATGCGTCCTGTTAATAATAGGTACTG
TACTGGGCTCTGTGTAAGTGTGCTTGGGGTAGGACCTATATTTAATACTGTTCTTAACATTTCAATTTTACTAGC
GAGAAATCTTTGATTTCAATTTTATTCTTTGTAATTCTAGACACTAGATTGTAGTTTAGCCATAACTGATGTTTTT
TAAAAAGGGATATATTTCTTGACAGTTGTTCAAAAAGAGACAAGTTTCAGTCCTCAATGCTGTCCTTTGTTT
TACAGGTACAAGTTTCTAGCTCAGACAACTATGAAAACTGTAGACTATTCTCAAGGTATTAACTCGCAGACC
CTCTGGGGGTAGGGGCTGTTTTCTAAGTTACAGGCAGAGTGGGACTGAGATGGTACAGTGTGCACAGACAGGTAC
TGAGCTGACAGACTGGGATTTTCTGTACTAAAATGTTACTTTGTATCAAAAGTTAAACAGGCTTTAGTACAACAA
ATAAAGGTCAATTTCTGT

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FIGURE 144

CGCAACGCCGGTGCCTGAGGAGCG**ATG**CCGAGGGAAATCATCACCCCTACAGTTGGGCCAGTGCGGCAATCAGATT
GGGTTCGAGTTCTGGAAACAGCTGTGCGCCGAGCATGGTATCAGCCCCGAGGCGATCGTGGAGGAGTTGCCCACC
GAGGGCACTGACCGCAAGGACGTCTTTTTCTACCAGGCAGACGATGAGCACTACATCCCCCGGGCCGTGCTGCTG
GACTTGGAACCCCCGGGTGATCCACTCCATCCTCAACTCCCCCTATGCCAAGCTCTACAACCCAGAGAACATCTAC
CTGTCCGGAACATGGAGGAGGAGCTGGCAACAACCTGGGCCAGCGGATTCTCCCAGGGAGAAAAGATCCATGAGGAC
ATTTTTGACATCATAGACCGGGAGGCAGATGGTAGTGACAGTCTAGAGGGCTTTGTGCTGTGTCACTCCATTGCT
GGGGGGACAGGCTCTGGACTGGGTTCCCTACCTCTTAGAACGGCTGAATGACAGGTATCCTAAGAAGCTGGTGCAG
ACATACTCAGTGTTTCCCAACCAGGACGAGATGAGCGATGTGGTGGTCCAGCCTTACAATTCACTCCTCACACTC
AAGAGGCTGACGCAGAATGCAGACTGTCTGGTGGTGTGTTGACAACACAGCCCTGAACCGGATTGCCACAGACCGC
CTGCACATCCAGAACCCATCCTTCTCCAGATCAACCAGCTGGTGTCTACCATCATGTGAGCCAGCACCACCACC
CTGCGCTACCCTGGCTACATGAACAATGACCTCATCGGCCCTCATCGCCTCGCTCATTCCACCCCCACGGCTCCAC
TTCCTCATGACCGGCTACACCCCTCTCACTACGGACCAGTCAGTGGCCAGCGTGAGGAAGACCACGGTCTTGAT
GTCATGAGGCGGCTGCTGCAGCCCAAGAACGTGATGGTGTCCACAGGCCGAGACCGCCAGACCAACCACTGCTAC
ATCGCCATCCTCAACATCATCCAGGGAGAGGTGGACCCACCCAGGTCCACAAGAGCTTGAGAGGATCCGGGAA
CGCAAGTTGGCCAACTTCATCCCGTGGGGCCCCGCCAGCATCCAGGTGGCCCTGTGAGGAAGTCTCCCTACCTG
CCCTCGGCCACCAGGCTCAGCGGGCTCATGATGGCCAACCACACCAGCATCTCCTCGCTCTTCGAGAGAACCTGT
CGCCAGTATGACAAGCTGCGTAAGCGGGAGGCCTTCCTGGAGCAGTTCGCAAGGAGGACATGTTCAAGGACAAC
TTTGATGAGATGGACACATCCAGGGAGATTGTGCAGCAGCTCATCGATGAGTACCATGCGGCCACACGGCCAGAC
TACATCTCCTGGGGCACCAGGAGCAG**TGAG**TCCCCCAGGACAGGGGACCCTCATCTGCCTTACTGGTTGGCCCA
AGCCCTGCCTGACTGACCACCCCTCAGAGCACAGATCAGGGACCTCAGCATCTCTTTCTCATATACATGGACT
CTCTGTTGGCCTGCAAACACATTTACTTCTCCTCTTATGAGACTATTTATCTTTAATAAAGCACTGGG

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FIGURE 145

MPREIITLQLGQCGNQIGFEFWKQLCAEHGISPEAIVEEFATEGTDRKDVFFYQADDEHYIPRAVLLDLEPRVIH
SILNSPYAKLYNPENIYLSEHGGGAGNNWASGFSQGEKIHEDIFDIIDREADGSDSLEGFVLCHSIAGGTGSGLG
SYLLERLNDRYPKKLVQTYSVFPNQDEMSDVVVQPYNSLLTLKRLTQNADCLVLDNTALNRIATDRLHIQNPSF
SQINQLVSTIMSASTTTLRYPGYMNDLIGLIASLIPTPRLHFLMTGYTPLTTDQSVASVRKTTVLDVMRRLLOP
KNVMVSTGRDRQTNHCYIAILNIIQGEVDPTQVHKSLQRIRERKLANFIPWGPASIQVALSRKSPYLP SAHRVSG
LMMANHTSISSLFERTCRQYDKLRKREAFLEQFRKEDMFKDNFDEMDTSREIVQQLIDEYHAATRPDYISWGTQE
Q

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FIGURE 146

AGATAACAAGAGTAATCCACAGACTTAAACATGAGCTCAGATGCCAGCCAAGGCGTGATTACCACTCCTCCTCC
TCCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAATGACCCAGAATACATTAGGGAGAGGAA
CATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAACGAGTTACTCAGATCCTGCAAAGTCC
TGCCTTTTCGGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAAGGCCACAACCCAACTGGATTACTAGC
ATTACAGCAGATTGCAGATTACATCATGGCCAATTCTTTCTCGGGTTTTTCTTCACCTCCTCTCAGTCTTGGCAT
GGTCACACCTATCAATGACCTTCCTGGTGCAGATACATCCTCATATGTGAAGGGAGAAAACTTACTCGCTGTAA
ACTTGCCAGCCTGTACAGACTTGTAGACTTGTGGATGGGCACACCTGGCAAATACCTATATCTCAGTAAGAAT
AAGTAAGGAGCAAGACCACATTATAATAATTCCCAGAGGCCTATCTTTTTCTGAAGCTACAGCCTCCAATTTGGT
GAAAGTCAATATAATAGGAGAAGTGGTTGACCAGGGAAGTACCAATTTGAAAATTGACCATACAGGATTCAGTCC
CCATGCTGCAATCTATTCAACACGTCCTGATGTTAAGTGTGTATACACATCCATACCCTTGCAACAGCAGCTGT
ATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTTCTGGGAGATGTTGCCTATTATGACTA
CCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTTCTGGGACCAAGTTGTAAGGTGCTGGT
ACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCTTTTCATTATATTTTTAATGTGCAACT
AGCCTGTGAGATTCAAGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGACAATCTCCATGTACTGGACTTTTCAGAA
GTATAAAGCTTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTGAATATGGGTTCCCATCAAAAATGGAA
GGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTGGGGTATAGAACAGGCTATGCTTACAG
GCATCCTCTCATTCGAGAGAAGCCTAGGCACAAGAGTGATGTGGAATCCCAGCAACTGTGACTGCTTTTTCTCTT
TGAAGACGATACAGTGCCACTCTCTCCTCTCAAATACATGGCACAGAGGCAACAGCGTGAAAAACAAGATGGCT
GAACTCACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCTCGGAACGGAGAAACCAGTCCCCGAACCAA
AATCAGTGGAATGAAAGCAGAAGACTCATCTAAAGTTAGTGGTGAACACCTATCAAAATTGAAGATCCAAATCA
GTTTGTTCTTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGAAATAAGATTCGGGAACAAAATCGATATGA
CTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGCTGGAATTGTTGTGGATAAGCCACCTTCTACTATGCAATT
TGAAGATGATGATCATGGCCCACCAGCTCCTCCTAACCCATTTAGTCATCTCACAGAAGGAGAAGTTGAAGAGTA
TAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGATGCTGAGCAGGAATTACTCTCAGATGACGCTTCATC
TGTTTCACAAATTCAGTCTCAAACCTCAGTCACCGCAAAATGTCCCTGAAAAATTAGAAGAAAACCATGAGCTGTT
TTCCAAGAGCTTCATCTCCATGGAAAGTGCCTGTATGGTAGTAAATGGCAAGGATGATATGCATGATGTTGAAGA
TGAGCTTGCTAAGCGAGTGAGTAGGTTAAGCACAAGTACAACCATAGAAAACATCGAGATTACTATTAAGTCTCC
AGAGAAAATCGAAGAAGTCTGTACCTGAAGGCTCCCCTTCAAAATCGCCATCCAAGAAAAAGAAAGAAATCCG
CACTCCTTCTTTTCTGAAAAAGAACAAAAAAGGAGAAAGTTGAGGCCTAAATAAAGTCTTTTTATAATTATTA
TTATAACAATGTGACATTGCACATCTAAATACCACATTTAAGTTGATCATTAAATGCAATGGTAGATCAGATTG
GGGGATGTAGCAAACTGGACTTTAAGAACTGGAAAGAGGTTTTACAAAAGAAAACTTTCAGATTCATCTCTCAT
TTTATATGTCCAGAAATGGCTTTGAATTTTAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATGAAGTATTAT
TATAATTCACCATAAACAGCTATCTGTCTGAATTACTTCAGGCCTTCTCCATAATATCTGTTAGAAAGAAATTGC
CAGTGAGCAAGTGAGAATTTTTATTCTCAATACCTGCTTCACCTTGATAATCATATTATAATTTTTTATCATGAT
TATTGACTATATTTTTGGAGTCCCATTGTTTCAGTGGGCATTAACAGAATGCTTTAAAACTTCTAAGACAAGAA
TCTATAGCATTAGTATACACTGGCACATAATTTTTTAAAAAGTTTTAAGAAAAGATTCAATTTGGAATTTTATTCA
CAGTATAAAATTTCTCACCTGAAGTAACTTTGTTTGCCAAAAAGTTGTTTTAATAAACTATAATTTTTGAAAA
CTTCCTTTTTTATTAGTTTAGAAAGCCCTTATTTTTCAACAAAGGGGATTTTGACACATAACATGGGTTATTT
AGTTTAACTCTGGC

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FIGURE 147

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRVQTQILQSPAFREDLECLI
QEQMKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFSPHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLLGDVAYYDYQGSLEEQEERIQLQKVLGPSCKVLVLRNHGVVALG
ETLEEAFHYIFNVQLACEIQVQALAGAGGVNDLHVLDLDFQKYKAFTYTVAAASGGGGVNMGSHQKWKVGEIEFEGLM
RTLNLGYRTGYAYRHPLIREKPRHKSDEIPATVTAFSFEDDTVPLSPLKYMAQRQQREKTRWLNSPNTYMKVN
VPEESRNETSPRKITWMKAEDSSKVSGGTPIKIEDPNQFVPLNTNPNEVLEKRNKIREQNRYDLKTAGPQSQL
LAGIVVDKPPSTMQFEDDDHGPPAPPNPFSHLTEGELEEKRTIERKQQGLEDAEQELLSDDASSVSQIQSQTQS
PQNVPEKLEENHELFSKSFISMEVPVMVNGKDDMHDVEDELAKRVSRLSTSTTIENTIEITIKSPEKIEEVLSP
GSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 148

AGATAACAAGAGTAATCCACAGACTTAAAACATGAGCTCAGATGCCAGCCAAGGCGTGATTACCACTCCTCCTCC
TCCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAATGACCCAGAATACATTAGGGAGAGGAA
CATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAACGAGTTACTCAGATCCTGCAAAGTCC
TGCCTTTCGGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAAGGCCACAACCCAAGTGGATTACTAGC
ATTACAGCAGATTGCAGATTACATCATGGCCAATTCTTTCTCGGGTTTTTCTTCACCTCCTCTCAGTCTTGGCAT
GGTCACACCTATCAATGACCTTCCTGGTGAGATACATCCTCATATGTGAAGGGAGAAAACTTACTCGCTGTAA
ACTTGCCAGCCTGTACAGACTTGTAGACTTGTGTTGGATGGGCACACCTGGCAAATACCTATATCTCAGTAAGAAT
AAGTAAGGAGCAAGACCACATTATAATAATTCCAGAGGCCTATCTTTTCTGAAGCTACAGCCTCCAATTTGGT
GAAAGTCAATATAATAGGAGAAGTGGTTGACCAGGGAAGTACCAATTTGAAAATTGACCATACAGGATTCACTCC
CCATGCTGCAATCTATTCAACACGTCTTGATGTTAAGTGTGTCTATACACATCCATACCTTGCAACAGCAGCTGT
ATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTTCTGGGAGATGTTGCCATTATGACTA
CCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTTCTGGGACCAAGTTGTAAGGTGCTGGT
ACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCTTTTTCATTATATTTTAAATGTGCAACT
AGCCTGTGAGATTCAAGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGACAATCTCCATGTACTGGACTTTCAGAA
GTATAAAGCTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTGAATATGGGTTCCCATCAAAAATGGAA
GGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTTGGGGTATAGAACAGGCTATGCTTACAG
GCATCCTCTCATTGAGAGAAGCCTAGGCACAAGAGTGATGTGGAATCCAGCAACTGTGACTGCTTTTTCCTT
TGAAGACGATACAGTGCCACTCTCTCCTCTCAATACATGGCACAGAGGCAACAGCGTGAAAAACAAGATGGCT
GAACTACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCTCGGAACGGAGAAACAGTCCCCGAACCAA
AATCAGTGGATGAAAGCAGAAGACTCATCTAAAGTTAGTGGTGGAAACACCTATCAAAATTGAAGATCCAAATCA
GTTTGTTCCTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGAAATAAGATTCGGGAACAAAATCGATATGA
CTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGTGGAATTGTTGTGGATAAGCCACCTTCTACTATGCAATT
TGAAGATGATGATCATGGCCCACCAGTCTCTCCTAACCATTAGTTCATCTCACAGAAGGAGAACTTGAAGAGTA
TAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGAAAACCATGAGCTGTTTCCAAGAGCTTCATCTCCAT
GGAAGTGCCTGTGATGGTAGTAAATGGCAAGGATGATATGCATGATGTTGAAGATGAGCTTGCTAAGCGAGTGAG
TAGGTTAAGCACAAAGTACAACCATAGAAAACATCGAGATTACTATTAAGTCTCCAGAGAAAATCGAAGAAGTCCT
GTCACCTGAAGGCTCCCCCTTCAAAATCGCCATCCAAGAAAAGAAGAAATTCCGCACTCCTTCTTTTCTGAAAA
GAACAAAAAAAAGGAGAAAAGTTGAGGCCATAATAAAGTCTTTTTATAATTATTATTATAACAATGTGACATTGCA
CATCTAAATACCACATTTAAGTTGATCATTAAATATGCAATGGTAGATCAGATTGGGGGATGTAGCAAACCTGGACT
TTAAGAACTGGAAAAGAGGTTTTACAAAAGAAAACTTTTCAGATTCTCTCATTTTATATGTCCAGAAATGGCT
TTGAATTTTAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATGAAGTATTATTATAATTCACCATAAACAGCT
ATCTGTCTGAATTACTTCAGGCCTTCTCCATAATATCTGTTAGAAAAGAAATTGCCAGTGAGCAAGTGAGAATTTT
TATTTCTCAATACCTGCTTCACTTGATAATCATATTATAATTTTTTATCATGATTATTGACTATATTTTTGGAGT
CCCATTGTTTCAGTGGGCATTAACAGAATGCTTTAAAACTTCTAAGACAAGAATCTATAGCATTAGTATACACT
GGCACATAATTTTTTAAAAAGTTTTAAGAAAAGATTCATTGGAATTTTATTCACAGTATAAAATTTCTCACCT
GAAGTAACTTTGTTTGCCAAAAAAGTTGTTTTAATAAACTATAATTTTGAAAACCTCCTTTTTTATTAGTTTAG
AAAGCCCCTTATTTTTCAACAAAGGGGATTTTGTACACATAACATGGGTATTATTAGTTTAACTCTGGC

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FIGURE 149

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRVITQILQSPAFREDLECLI
QEQMKKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFSPHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLGDAVYYDYQGSLEEQEERIQLQKVLGPSCKVLVLRNHGVVALG
ETLEEAFFHYIFNVQLACEIQVQALAGAGGVDNLHVLDLQKYKAFTYTVAAASGGGGVNMGSHQKWKVGEIEFEGLM
RTL DNLGYRTGYAYRHPLIREKPRHKS DVEIPATVTAFS FEDDTVPLSPLKYMAQRQQREKTRWLN SPNTYMKVN
VPEESRNGETSPRIKITWMKAEDSSKVSGGTPIKIEDPNQFVPLNTNPNEVLEKRNKIREQNRYDLKTAGPQSQL
LAGIVVDKPPSTMQFEDDDHGPPAPPNPFSHLTEGELEEYKRTIERKQQGLEENHELFSKSFISMEVPVMVVNGK
DDMHDVEDELAKRVSRLSTSTTIENIEITIKSPEKIEEVLSPEGSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 150

TTTTCCCGCGAACTCGGCGGCTGAGCGTGGAGGTTCTTGTCTCCCCTGGTTTGTGAAGTGCGGAAAACCAGAGG
CGCAGTCATGTCGGGATTTCGACGATCCTGGCATTCTTCTACAGCGACAGCTTCGGGGGCGACGCCAGGCCGACGA
GGGGCAGGCCCCGAAATCGCAGCTGCAGAGGCGCTTCAAGGAGTTCTGCGGCAGTACCGAGTGGGCACCGACCG
CACGGGCTTCACCTTCAAATACAGGGATGAACTCAAGCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGA
GATGGAGGATCTGGCCAGCTTTGATGAGGACCTGGCCGACTACTTGTACAAGCAGCCAGCCGAGCACCTGCAGCT
GCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGTGACCCGGCCCCGGCCTTCTGGGGAGGAGGTGCTCCAGGA
CATCCAGGTTCATGCTCAAGTCGGACGCCAGCCCTTCCAGCATTCTGATAGCCTGAAGTCGGACATGATGTCACACCT
GGTGAAGATCCCTGGCATCATCATCGCGGCCCTCTGCGGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCG
CAGCTGCCGCAACACCCTCACCAACATTGCCATGCGCCCTGGCCTCGAGGGCTATGCCCTGCCAGGAAGTGCAA
CACAGATCAGGCTGGACGCCCCAAATGCCCATTTGGACCCGTACTTCATCATGCCCCGACAAATGCAAATGCGTGGA
CTTCCAGACCCTGAAGCTGCAGGAGCTGCCTGATGCAGTCCCCACGGGGAGATGCCAGACACATGCAGCTCTA
CTGCGACAGGTACCTGTGTGACAAGGTCGTCCCTGGGAACAGGGTTACCATCATGGGCATCTACTCCATCAAGAA
GTTTGGCCTGACTACCAGCAGGGGCGGTGACAGGGTGGGCGTGGGCATCCGAAGCTCCTACATCCGTGTCTCTGGG
CATCCAGGTGGACACAGATGGCTCTGGCCGCGAGCTTTGCTGGGGCCGTGAGCCCCAGGAGGAGGAGGAGTTCCG
TCGCTTGGCTGCCCTCCCAAATGTCTATGAGGTTCATCTCCAAGAGCATCGCCCCCTCCATCTTTGGGGGACAGA
CATGAAGAAGGCCATTGCCCTGCCTGCTCTTTGGGGGCTCCCGAAAGAGGCTCCCTGATGGACTTACTCGCCGAGG
AGACATCAACCTGCTGATGCTAGGGGACCCTGGGACAGCCAAGTCCCAGCTTCTGAAGTTTGTGGAGAAGTGTTT
TCCCATTTGGGGTATACACGTCTGGGAAAGGCAGCAGCGCAGCTGGACTGACAGCCTCGGTGATGAGGGACCCCTT
GTCCCGGAATTTTCATCATGGAGGGCGGAGCCATGGTCTTGGCCGATGGTGGGGTCTGTCTGTATTGACGAGTTTGA
CAAGATGCGAGAAGATGACCGTGTGGCAATCCACGAAGCCATGGAGCAGCAGACCATCTCTATCGCCAAGGCTGG
GATCACCACCACCCTGAACTCCCGCTGCTCCGTCTGGCTGCTGCCAACTCAGTGTTTCGGCCGCTGGGATGAGAC
GAAGGGGGGAGGACAACATTGACTTCATGCCCCACCATCTTGTGCGGCTTCGACATGATCTTCATCGTCAAGGATGA
GCACAATGAGGTGAGGGATGTGATGCTGGCCAAGCATGTTCATCACTCTGCACGTGAGTGCACTGACACAGACACA
GGCTGTGGAGGGCGAGATTGACCTGGCCAAGCTGAAGAAGTTTATTGCCTACTGCCGAGTGAAGTGTGGCCCCCG
GCTGTGACGAGAGGCTGCAGAGAACTGAAGAACCGCTACATCATCATGCGGACGGGGCCCCGTGAGCAGCAGAGG
GACAGTGACCGCGTCCAGCATCCCCATCACTGTGCGGCAGTTGGAGGCCATTGTGCGCATCGCGGAAGCCCTCAG
CAAGATGAAGCTGCAGCCCTTCGCCACAGAGGCAGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTGTCCACGTT
GGATGCTGCCTTGTCCGGTACCCTGTGAGGGGTGGAGGGCTTCACCAGCCAGGAGGACCAGGAGATGCTGAGCCG
CATCGAGAAGCAGCTCAAGCGCCGCTTTTGCCATTGGCTCCAGGTGTCTGAGCACAGCATCATCAAGGACTTCAC
CAAGCAGAAAATACCCGGAGCACGCCATCCACAAGGTGCTGCAGCTCATGCTGCGGCGCGGCGAGATCCAGCATCG
CATGCAGCGCAAGGTTCTCTACCGCTCAAGTGAGTCGCGCCGCTCACTGGACTCATGGACTCGCCACGCTCGCC
CTCCTTGGCCGCTGCTGCCATTGACAATGTTGCTGGGACCTCTGCCTCCCCACTGCAGCCCTCGAACTTCCAGG
CACCCCTCCTTTCTGCCCCAGAGGAAGGAGCTGTAGTGTCTGCTGCTTCTGGGCGCCCGCTCTAGCGGGTTCTGG
GAAGTGTGCTTTTGGCATCCGTTAATAATAAAGCCACGGTGTGTTTCAGGT

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FIGURE 151

MSGFDDPGIFYSDSFGGDAQADEGQARKSQLQRRFKEFLRQYRVGTDRTGFTFKYRDELKRHYNLGEYWIEVEME
DLASFDEDLADYLYKQPAEHLQLLEEAKEVADEVTRPRPSGEEVLQDIQVMLKSDASPSSIRSLKSDMMSHLVK
IPGIIIAASAVRAKATRISIQCRSCRNTLTNIAMRPGLEGYALPRKCNTDQAGRPKCPLDPYFIMPDKCKCVDFQ
TLKLQELPDVPHGEMPRHMQLYCDRYLCDKVVPGNRVTIMGIYSIKKFGLTTSRGRDRVGVGIRSSYIRVLGIQ
VDTDGSGRSFAGAVSPQEEEEFRRLAALPNVYEVIKSIAPSIFFGGTDMKKAIACLLFGGSRKRLPDGLTRRGI
NLLMLGDPGTAKSQLLKFEKCSPIGVYTSKGSSAAGLTASVMRDPSSRNFIIEGGAMVLADGGVVCIDEFDKM
REDDRVAIHEAMEQQTISIAGITTTLNSRCSVLAAANSVFGRWDETKGEDNIDFMPTILSRFDMIFIVKDEHN
EVRDVMLAKHVITLHVSALTQTQAVEGEIDLAKLKKFIAYCRVKCGPRLSAEAAEKLNRYIIMRTGPVSTRGTV
TASSIPITVRQLEAIVRIAEALSKMKLQPFATEADVEEALRLFQVSTLDAALSGTSLSGVEGFTSQEDQEMLSRIE
KQLKRRFAIGSQVSEHSIIKDFTKQKYPEHAHKKVLQLMLRRGEIQHRMQRKVLYRLK

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FIGURE 152

ATATAACCGCGTGGCCCGCGCGCGCTTCCCTCCCGGCGCAGTCACCGGCGCGGTCTATGGCTGCGACTTCTCT
AATGTCTGCTTTGGCTGCCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTTCGCCTTCGCCCTTTCCACCTCGC
GGCAGTTCGAAATGAAGCTGTTGTCAATTTCTGGAAGGAACTGGCCCAGCAGATCAAGCAGGAAGTGCGGCAGGA
GGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAG
TCACTCCTATGTCCTCAACAAAACCAGGGCAGCTGCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGC
TTCAATTTAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGT
TCAGTTGCCTCTTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGG
CTTTATGTAATTAATGTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTG
GGAAATAATCAAGCGAACTGGCATTCCAACCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGG
AATGCCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATC
TCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATACAATTCTTGAGATATTGTAATATCTGCTGCAGGTAT
TCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCACGA
TCCTGTAACCTGCCAAACCCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAGCTGGGTATATCAC
TCCAGTTCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTGCAAAAAAGGT
GCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAATTAACTACTGTGTCTTCT
GTGTCACAAACAGCACTCCAGGCCAGCTCAAGAAGCAAAGCAGGCCAATAGAAATGCAATATTTTTAATTTATTC
TACTGAAATGGTTTTAAATGATGCCTTGTATTTATTGAAAGCTTAAATGGGTGGGTGTTTCTGCACATACCTCTG
CAGTACCTCACCAGGGAGCATTCCAGTATCATGCAGGGTCTGTGATCTAGCCAGGAGCAGCCATTAACTAGTG
ATTAATATGGGAGACATTACCATATGGAGGATGGATGCTTCACTTTGTCAAGCACCTCAGTTACACATTCGCCTT
TTCTAGGATTGCATTTCCCAAGTGCTATTGCAATAACAGTTGATACTCATTTTAGGTACCAGACCTTTTGAGTTC
AACTGATCAAACCAAAGGAAAAGTGTGCTAGAGAAAATTGGGGAAAAGGTGAAAAAGAAAAAATGGTAGTAATT
GAGCAGAAAAAAATTAATTTATATATGTATTGATTGGCAACCAGATTTATCTAAGTAGAACTGAATTGGCTAGGA
AAAAAGAAAAACTGCATGTTAATCATTTTCCTAAGCTGTCTTTTGGAGGCTTAGTCAGTTTATTGGGAAAATGTT
TAGGATTATTCCTTGCTATTAGTACTCATTTTATGTATGTTACCCTTCAGTAAGTTCTCCCCATTTTAGTTTTCT
AGGACTGAAAGGATTCTTTTCTACATTATACATGTGTGTTGTCATATTTGGCTTTTGCTATATACTTTAACTTCA
TTGTTAAATTTTTGTATTGTATAGTTTCTTTGGTGTATCTTAAACCTATTTTTGAAAAACAACTTGGCTTGAT
AATCATTTGGGCAGCTTGGGTAAGTACGCAACTTACTTTTCCACCAAAGAACTGTCAGCAGCTGCCTGCTTTTCT
GTGATGTATGTATCCTGTTGACTTTTCCAGAAATTTTTTAAGAGTTTGAGTTACTATTGAATTTAATCAGACTTT
CTGATTAAAGGGTTTTCTTTCTTTTTTAATAAAACACATCTGTCTGGTATGGTA

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FIGURE 153

MSALAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVQRQEEVWVASGNKRPHLSVILVGENPAS
HSYVLNKTRAAAVVGINSETIMKPASISEEELLNLINKLNDDNVDGLLVQLPLPEHIDERRICNAVSPDKDVDG
FHVINVGRMCLDQYSMLPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTIS
HRYTPKEQLKKHTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYIT
PVPGGVGPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

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FIGURE 154

CTCCACCGCGGCGAGAGGCATGGGCACGTGGCTGCCGAGGGTGGCCGAGCTCTGGGAAGAAAAGCCCGTGTGCCT
CTGCATAGCGTCGCTACAGCGCTGACTCGGTGTGGATTGATTGGAAAGGTTTGAGGGAGTACTTGGGAAGCATGG
TGGCACATGATGAGACTGGAGGTCTCCTACCTATTAAAAGGACCATACGAGTCCTAGATGTCAATAACCGTCCCT
TCAGAGAACAAGAGGAGCCAAGCAATAAAAAGAGTTTCGACCTCTGGCTCGTGTACGTCCTTGGCAAATTTAATCT
CTCCTGTAAGAAATGGAGCTGTGACAGCTTTTGGTCAAACAATACAGTCATTTACCCCTTCGTGGTGACCACAGAT
CCCCAGCCTCTGCCAGAAGTTTTCTAGCAGGTCAACAGTCCCAACACCCGCCAAGAGAAGGAGCAGTGCACTGT
GGTCAGAGATGCTGGACATCACCATGAAGGAGTCTCTACCACCAGGGAGATCAGACGGCAGGAGGCAATATATG
AAATGTCCCGAGGTGAACAGGATTTAATTGAGGATCTCAAACCTTGCAAGAAAGGCCTACCATGACCCCATGTTAA
AGTTGTCCATCATGTGAGAAGAGGAACCTCACACATATATTTGGTGATCTGGACTCTTACATACCTCTGCATGAAG
ATTTGTTGACAAGAATAGGAGAAGCAACCAAGCCTGATGGAACAGTGGAGCAGATTGGTCACATTCTCGTGAGCT
GGTTACCGCGCTTGAATGCCTACAGAGGTACTGTAGTAACCAGCTGGCAGCCAAAGCTCTTCTTGATCAAAAAGA
AACAGGATCCAAGAGTCCAAGACTTCCTCCAGCGATGTCTCGAGTCTCCCTTCAGTCGAAAAGTAGATCTTTGGA
GTTTCCTAGATATCCCTCGAAGTCGCCTAGTCAAATACCCCTTACTGTAAAAGAAATTCTTAAACACACTCCAA
AAGAGCACCCGTGATGTTTCAGCTTCTGGAGGATGCTATATTGATAATACAGGGAGTCCTCTCTGATATCAACTTGA
AGAAAGGTGAATCCGAGTGCCAGTATTACATCGACAAGCTGGAGTACCTGGATGAAAAGCAGAGGGGACCCCGAGAA
TCGAAGCGAGCAAAGTGCTGCTGTGCCATGGGGAGCTGCGGAGCAAGAGTGGACATAAACTTTACATTTTCTGT
TTCAAGACATCTTGGTTCTGACTCGGCCCCGTACACGGAACGAACGGCACTCTTACCAGGTTTACCGGCAGCCAA
TCCCAGTCCAAGAGCTAGTCTTAGAAGACCTGCAGGATGGAGATGTGAGAATGGGAGGCTCCTTTTCGAGGAGCTT
TCAGTAACTCAGAGAAAGCTAAAAATATCTTTAGAAATTCGCTTCCATGACCCCTCTCCAGCCCAGTCTCACACTC
TGCAAGCCAATGACGTGTTCCACAAGCAGCAGTGGTTCAACTGTATTGAGCGGCCATTGCCCCCTTCCAGTCGG
CAGGCAGTCCACCTGAGCTGCAGGGCCTGCCGGAGCTGCACGAAGAGTGTGAGGGGAACCAACCCCTCTGCGAGGA
AACTCACAGCCCAGAGGAGGGCATCCACAGTTTCCAGTGTTACTCAGGTAGAAGTTGATGAAAACGCTTACAGAT
GTGGCTCTGGCATGCAGATGGCAGAGGACAGCAAGAGCTTAAAGACACACCAGACACAGCCCGGCATCCGAAGAG
CGAGGGACAAAGCCCTTTCTGGTGGCAAACGGAAAGAGACTTTGGTGTAGAGAAGGCTCTGTGTGTTAACTGATG
GGAGAGACTGTTTGTATAAATGTGTACAGTTTTGTTTTCTCGTAAGGGGAGCATCATAGGGTTACTTTATACC
AGTTGTAACATTTTCATTGTTTTTGGTTGTTCTTTTTTCTTTTTTAAATGGCAGCTAAAGATATACAGATTACTG
TTAAATTGCAGTCCTTTTTTTTTTAAAGATATTTTCTTGAATTATTTAGAACATGGTAAGCCTGGTATTTTTTA
ATCAAAACAAATATTTATGAAATGGGTTTTCTCTTAATTCTGGATTCATCATGGCTTTCTAATACCAATTGTAAT
ATTTACAATATTCACCAAACTTAGAATTTTGCAAATGCTGGAATTCTGCCAGTGTCTTTGCTAAGCCTTGCA
TGCAAAATTTGAAATTTTAACATTGGCACCCAAAACCTACATGGAATGTATGTCTGGAGTATTTCAAACCTTACA
TTGAAACATAATTTCTTGGAAAACAAACCATAAGCCTGAGGAGGTTTTTATCAACTGGAATGCTTTATATTAGT
TTGTTTTTCACTGTACATTCCCTCATTTTACATTCAATTAACCTGCCGATTATTTAATTTTTTTATTGTAAAGTAG
TTTTTAGCATTTGCTTTTTATTTTTTACTTTGATGCCTTTTCAAATTGGCATGTCTTTAAAGTATTTTTCTTCCT
GATTAATAATGTGTGTGTATGTGTGTGTGTGTGTATATATATATATTTTTTTTAAATCACATTAATTTTACCAA
GTGAAACCAAGCCATACTGTTTTTGGCCAATTAAGAAAATTGCCATTTTTAAAGTGTAGCATTTTCAAGGTAAG
ACCATGAAATGGCTTGATGTATTCTAGACTACTGAAAGAAAACCACTTCAAAGATTTTGTGAAAGTTTTAGTG
TTGTCTGAAATGCAAGAGGGAAGGTGATTGGTAGTGAGTTAAAAGAAAAAGAGAGGAAAAGAGAGTAGTTTTGTC
TTCAAGTAAATGTCTGGTTGTGCCAGACATTTACAAGTGTGAAAGGAGATAGGAGAAGCTCAACTTGAGGGCG
TGTAAGTAAATTGTAAGGCTCGAGGGGACGTGGACTTATTTGCCTTGGTTTGCAATACCTGCAATAATGAGTT
TGAAAAGAAACAATGAAATGTGTTAAAAATTTGACCATATTAGATAAAATTTGGTGGATTTAGTCATAAGATGGA
AAAAGACTGGTGAATCTTTTATTACAAAATGTTTCTGTTAAAAATGGGATCATCATCTTTGAAAGGGGGGAGGAGG
AGTAAAGCCCGATTATAATGGTGATCAATTCAAGTCAGTGTGACTATTCTGTGAAATATATTGGCCAGTGGA
AATGATAATCAGAAAAGACTGTAAATAGATCCATCCAAATGATTTCTCTGTACAAATGAATGATACTATTAAAAA
AAAAAAAAAA

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FIGURE 155

MVAHDETGGLLP IKRTIRVLDVNNQSFREQEEPSNKRVRPLARVTS LANLISPVRNGAVRRFGQTIQSFTLRGDH
RSPASAQKFSSRSTVPTPAKRRSSALWSEMLDITMKESLTTREIRRQEAIYEMSRGEQDLIEDLKLARKAYHDPM
LKLSIMSEEEELTHIFGDLD SYIPLHEDLLTRIGEATKPDGTVEQIGHILVSWLPRLNAYRGYCSNQLAAKALLDQ
KKQDPRVQDFLQRCLESPFSRKLDLWSFLDIPRSRLVKYPLLLKEILKHTPKHEHPDVQLLEDAILIIQGVLS DIN
LKKGESECQYYIDKLEYLDEKQ RDPRIEASKVLLCHGELRSKSGHKLYIFLFQDILVLTRPVTRNERHSYQVYRQ
PIPVQELVLEDLQDGDVRMGGSF RGAFSNSEKAKNIFRIRFHDPSPAQSHTLQANDVFHKQQWFNCIRAAIAPFQ
SAGSPPELQGLPELHEECEGNHPSARKLTAQRRASTVSSVTQVEVDENAYRCGSGMQMAEDSKSLKTHQTQPGIR
RARDKALSGGKRKETLV

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FIGURE 156

AGAGGCTTCCCTGGCTGGTGCCTGAGCCCGGGCGTCCCTCGCCCCCGCCCTCCCCGCATCCCTCTCCTCCCTCGC
GCCTGGCCCTGTGGCTCTTCCCTCCCTCCCTCCTTCCCCCCCCCCCCACCCCTCGCCCGCTGCCTCCCTCGGCCCCA
GCCAGCTGTGCCGGCGTTTGTGGCTGCCCTGCGCCCGGCCCTCCAGCCAGCCTTCTGCCGGCCCCGCGCGGATC

GAGGTGCCCCAGCCGGAGCCCCGCGCCAGGCTCGGCTCTCAGTCCAGCAGGCGTGTGCGGTGGCGCCCAGCGTCCG
GGCCACCTCCCGGGCCTCCTGCTGGGATCTCATGGCCTCCTGGGGTCCCCGGTGCGGGCGGCCGCTTCCCTCGCCG
GTCACCACCCTCACCAGACCATGCACGACCTCGCCGGGCTCGGCAGCCGCAGCCGCTGACGCACCTATCCCTG
TCTCGACGGGCATCCGAATCCTCCCTGTCGTCTGAATCCTCCGAATCTTCTGATGCAGGTCTCTGCATGGATTCC
CCCAGCCCTATGGACCCCCACATGGCGGAGCAGACGTTTGAACAGGCCATCCAGGCAGCCAGCCGGATCATTGCA
AACGAGCAGTTTGCCATCAGACGCTTCCAGTCTATGCCGGTGAGGCTGCTGGGCCACAGCCCCGTGCTTCGGAAC
ATCACCAACTCCCAGGCGCCCCGACGGCCGGAGGAAGAGCGAGGCGGGCAGTGGAGCTGCCAGCAGCTCTGGGGAA
GACAAGGAGAATGTGCGCTTCTGGAAGGCCGGGTGGGAGCTCTCCGGGAAGAGGAGGGGGCATGCTGGGGTGGT
TCCCTGGCATGTGAGGACCCTCCTCTCCCATCTTGGCTGCAGGATGGATTGTCTTCAAGATGCCATGGAAGCCC
ACACATCCCAGCTCCACCCATGCTCTGGCAGAGTGGGCCAGCCGCAGGGAAGCCTTTGCCCAGAGACCCAGCTCG
GCCCCGACCTGATGTGTCTCAGTCCTGACCGGAAGATGGAAGTGGAGGAGCTCAGCCCCCTGGCCCTAGGTGCG
TTCTCTCTGACCCCTGCAGAGGGGGATACTGAGGAAGATGATGGATTGTGGACATCCTAGAGAGTGACTTAAAG
GATGATGATGCAGTTCCCCCAGGCAITGGAGAGTCTCATTAGTGCCCCACTGGTCAAGACCTTGGAAGAGGAAAGAG
GAAAAGGACCTCGTCATGTACAGCAAGTGCCAGCGGCTCTTCCGCTCTCCGTCCATGCCCTGCAGCGTGATCCGG
CCCATCCTCAAGAGGCTGGAGCGGCCCCAGGACAGGGACACGCCCGTGCAGAATAAGCGGAGGCGGAGCGTGACC
CCTCCTGAGGAGCAGCAGGAGGCTGAGGAACCTAAAGCCCGCGTCTCCGCTCAAAATCACTGTGTACGATGAG
ATCGAGAACCTCCTGGACAGTGACCAACGAGAGCTGATTGGAGATTACTCTAAGGCCTTCCCTCTACAGACAGTA
GACGGAAAGCACCAAGACCTCAAGTACATCTCACCAGAAACGATGGTGGCCCTATTGACGGGCAAGTTCAGCAAC
ATCGTGGATAAGTTTGTGATTGTAGACTGCAGATACCCCTATGAATATGAAGGCGGGCACATCAAGACTGCGGTG
AACTTGCCCCCTGGAACGCGACGCCGAGAGCTTCCCTACTGAAGAGCCCCATCGCGCCCTGTAGCCTGGACAAGAGA
GTCATCCTCATTTTCCACTGTGAATTCTCATCTGAGCGTGGGCCCCGCATGTGCCGTTTCATCAGGGAACGAGAC
CGTGCTGTCAACGACTACCCAGCCTCTACTACCCTGAGATGTATATCCTGAAAGGCGGCTACAAGGAGTTCTTC
CCTCAGCACCCGAACCTTCTGTGAACCCAGGACTACCGGCCCATGAACCACGAGGCCTTCAAGGATGAGCTAAAG
ACCTTCCGCCTCAAGACTCGCAGCTGGGCTGGGGAGCGGAGCCGGCGGGAGCTCTGTAGCCGGCTGCAGGACCAG
TGAGGGGCGCTGCGCCAGTCTGCTACCTCCCTTGCCCTTCGAGGCCTGAAGCCAGCTGCCCTATGGGCCTGCCGG
GCTGAGGGCCTGCTGGAGGCCTCAGGTGCTGTCCATGGGAAAGATGGTGTGGTGTCTGCTGCTGTCTGCCCCAGCC
CAGATTCCCCCTGTGTCTATCCCATCATTTTCCATATCCTGGTGCCCCCACCCTGGAAGAGCCCAGTCTGTTGAG
TTAGTTAAGTTGGGTTAATACCAGCTTAAAGGCAGTATTTGTGTCTCCTCAGGAGCTTCTGTTTCCCTGTTAGG
GTTAACCCCTTCATCTTCCCTGTGCTCCTGAAACGCTCCTTTGTGTGTGTGTGCTGAGGCTGGGGAGAGCCGTGGT
CCCTGAGGATGGGTGAGAGCTAACTCCTTCCCTGGCCTGAGAGTCAGCTCTCTGCCCTGTGTACTTCCCGGGCCA
GGGCTGCCCCCTAATCTCTGTAGGAACCGTGGTATGTCTGCCATGTTGCCCTTTCTCTTTTCCCTTTCTGTCTC
CACCATACGAGCACCTCCAGCCTGAACAGAAGCTCTTACTCTTTCTATTTTCACTGTGTGCTTGGTCT
GTTTGACTTTACGCCCATCTCAGGACACTTCCGTAGACTGTTTAGGTTCCCTGTCAAATATCAGTTACCCACTC
GGTCCCAGTTTTGTTGCCCCAGAAAGGATGTTATTATCCTTGGGGGCTCCCAGGGCAAGGGTTAAGGCCTGAAT
CATGAGCCTGCTGGAAGCCCCAGCCCTACTGCTGTGAACCTGGGGCCTGACTGCTCAGAACTTGCTGCTGTCTT
GTTGCGGATGGATGGAAGGTTGGATGGATGGGTGGATGGCCGTGGATGGCCGTGGATGCGCAGTGCCTTGCATAC
CCAAACCAGGTGGGAGCGTTTTGTTGAGCATGACACCTGCAGCAGGAATATATGTGTGCCTATTTGTGTGGACAA
AAATATTTACACTTAGGGTTTGGAGCTATTCAAGAGGAAATGTACAGAAAGCAGCTAAACCAAGGACTGAGCACC
CTCTGGATTCTGAATCTCAAGATGGGGGAGGGCTGTGCTTGAAGGCCCTGCTGAGTCATCTGTTAGGGCCTTGG
TTCAATAAAGCACTGAGCAAGTTGAGAAAAA

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FIGURE 157

MEVPQPEPAPGSALSPAGVCGGAQRPGHLPGLLLGSHGLLGSPVRAAASSPVTTLTQTMHDLAGLGSRSRLTHLS
LSRRASESSLSESSESSDAGLCMDSPSPMDPHMAEQTFEQAIQAASRIIRNEQFAIRRFQSMFVRLLGHSPLR
NITNSQAPDGRRKSEAGSGAASSSGEDKENVRFWKAGVGALREEEGACWGGSLACEDPPLPSWLQDGFVFKMPWK
PTHPSSSTHALAEWASRREAFQRPSSAPDLMCLSPDRKMEVEELSPLALGRFSLTPAEGDTEEDDGFVDILES
KDDDAVPPGMESLISAPLVKLEKEEEKDLVMYSKQRLFRSPSMPCSVIRPILKRLRPQDRDTPVQNKRRRSV
TPPEEQEAEKPKARVLRSLCHDEIENLLSDHRELIGDYKAFLLQTVDGKHQDLKYISPETMVALLTGKFS
NIVDKFVIVDCRYPIEYEGGHIKTAVNLPLERDAESFLLKSPIAPCSLDKRVILIFHCEFSSEGRPMCRFIRER
DRAVNDYPSLYPEMYILKGGYKEFFPQHPNFCEPQDYRPMNHEAFKDELKTFRLKTRSWAGERSRRELCSRLQD
Q

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FIGURE 158A

CTGCGGCCGCTGGTTTTCTTGCCCTTAAGGAGCCCATTGCCTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAA
AGCGGGCAGCAGGATGTTGGTGGATGCGGCCAACTCCAATGGGCCTTTCCAGCCCGTGGTCTTCTCCATATTCCG
AGATGTTCTCTCTGCTGATCAAGAGAAGCTTTTTATCCAGAAGTTACGTCAAGTGTGCGTCTCTTTGACTTTGT
TTCTGATCCACTAAGTGACCTAAAGTGGAAGGAAGTAAACGAGCTGCTTTAAGTGAAATGGTAGAATATATCAC
CCATAATCGGAATGTGATCACAGAGCCTATTTACCCAGAAGTAGTCCATATGTTTGAGTTAACATGTTTCGAAC
ATTACCACCTTCTCCAATCTACGGGAGCGGAATTTGACCCGGAGGAAGATGAACCAACGTTAGAAGCAGCCTG
GCCTCATCTACAGCTTGTATGAATTTTTCTTAAGATTTTATAGAGTCTCCAGATTTCCAACCTAATATAGCGAA
GAAATATATTGATCAGAAGTTTGTATTGCAGCTTTTAGAGCTCTTTGACAGTGAAGATCCTCGGGAGAGAGATT
TCTTAAACCACCTTACAGAACTATGGGAAATTCCTAGGCTTGAGAGCTTACATCAGAAAACAGATAAATAA
TATATTTTATAGGTTTATTTATGAAACAGAGCATCATAATGGCATAGCAGAGTTACTGGAAATATTGGGAAGTAT
AATTAATGGATTTGCCTTACCCTAAAAGAAGAGCACAAGATTTCTTATTGAAGGTGTTACTACCTTGCACAA
AGTGAAATCTCTGAGTGTCTACCATCCCCAGCTGGCATACTGTGTAGTGCAGTTTTTAGAAAAGGACAGCACCT
CACGGAACCAAGTGGTGTATGGCACTTCTCAAATACTGGCCAAAGACTCACAGTCCAAAAGAAGTAATGTTCTTAA
CGAATTAGAAGAGATTTTAGATGTCAATGAACCATCAGAATTTGTGAAGATCATGGAACCCCTCTCCGGCAGTT
GGCCAAATGTGTCTCCAGCCCACTTCCAGGTGGCAGAGCGAGCTCTCTATTACTGGAATAATGAATACATCAT
GAGTTTAATCAGTGACAACGCAGCGAAGATTCTGCCCATCATGTTTCTCTTGTACCGCAACTCAAAGACCCA
TTGGAACAAGACAATACATGGCTTGATATACAACGCCCTGAAGCTCTTCATGGAGATGAACCAAAAGCTATTGGA
TGACTGTACACAACAGTTCAAAGCAGAGAACTAAAAGAGAAGCTAAAAATGAAAGAACGGGAAGAAGCATGGGT
TAAATAGAAAATCTAGCCAAAGCCAATCCCCAGTACACAGTGTATAGTCAAGCCAGCACCATGAGCATTCCGGT
TGCAATGGAGACAGATGGGCTTTATTTGAAGATGTGCAGATGCTGAGAAAGACAGTGAAGGACGAGGCTCATCA
GGCACAGAAAGATCCGAAGAAGGACCGTCTCTTGCACTCCGCAAGTCCGAGCTGCCTCAGGACCCCCACACCAA
GAAAGCCTTGGAAGCTCACTGCAGGGCCGATGAGCTGGCCTCCCAGGACGGCCGCTAGCCTCCGGGGCGCCGCGT
CGGGGCCGGGCCCCGAGTTCTTTCCGGATTCTGTAGAAAATACATACTTCTGTGCCATACCAATCAGTTACA
CTCAAAGCTTTCTTGACCCCGTTCCGTAGGCAATAACGTGCGTCCGCCTCAGCGCGAGATTAGGAGTTCAAACA
ATGGTGACTTCCCAGAGCCCGCTGGCAGAGCCGCGGGTTGACGACGGTGTCTCGCAGTGTGCGCGCCACCCAG
CGTAGTCCAAGTCAGACTATTTACAAAGTCAGAGCGATAGGAAAGCACCTTGCCCTTCATCTTCATGTTCTCCC
AAATGGAAGTTAGGATCTTTTAAACATAGGTGGTTCTGTGATAACATCAGTGTTTTCCAAATCAAAGGAACGCTTT
AAAAAATAGGACCTATTTTTTAAGACTTTACAGCCTTTGAAATGGTTTTCCACGTGATTGTTACGCCAGCAGTTCT
TTTGTGTTTTTTCAATCTCAGTGAATGGCTCTTTGCTTTTCAGATTCTCACGCAACGTACTGGGCAAATGACAA
TCCTCAGCCGCTGGTATTTTCTAAGGGGTCTCTTCACTTTGATGAGTGACATGAACACCGTGTCTCTTCTCTTG
TGTGTACCTAAAGCCATATTTCCAAGTCTGTGGTACTCCAGGATTCCAGGAGTAAGCCTGTAGAAGAGATTTATT
TTAAAAGAGATTGCTCTGAAATTTATCTTAAAAGAGCTTGCTCTGTCTACCTTGACAGAAATTGGAGTTTTAAAA
TTATGTGTTAATATTTTTTATTGAGATTTTCGTTTCCGTCAACTTAAACATTGTTGCCCTTCAACAAGGCTCTTG
AATTAATAAAATTATAGTCTCTAAGAATTCCACATTTTATGGAAGTTAGAGCAAAATCATTTTGAGTTAAGCCA
GTTCTTAGCCTAATGCAAACTGCAGCGCCTTAAAGCATAAAGTAACACAACAGCATTGCACGGGGCCGGCACTGC
CGCTGCCTTCACTGAAGGCTGCAGTGTCTGTTCTGAGAGCTTGAGGAGGCACCAGCGAGGATGACGTTTAGTGGA
GCTCTTTCTGTTGAAAAGAGCTCACGTTATCAACACCTTGTAAGGAAAATACAGTGTCTGAGTTTTTCATCGGTCT
TCATATGCTGCTATATATTTCCACAGAGTTTCTTGATGTACTGAGCTTTTGTGTTTAGATGGAATAGCACAAAGGAG
AAAAATCTTTAACTTAGTGCTTTGTCTATTCTTTATTTCTCTCAGGGTGGCCAGTATTTTGACTTATTTATCCT
GCTTGAAAGCTACTTGAGATGTGTACTGCTATTCTAAACACGTGATCTAGTTTCTTTCATCTCTGGCATAAGATT
ATATACTTAATGTAAAGTGTCTTGAGGCATAAAAGACAAAATGTGGCTTATTTTAGGATCTGTTTTTTCATCGA
GGTCTCGGGTATCCTTTCAAAGATAGTGAGAAGCAGACACTGCTCCTTGTCAGCTCTGGTACCTCCTGCCACT
GCTGTCACTTCAAGCCACTGGCAATGCTTCTGTCTCGTGTCTTGAGGAAAAATCACCTGGGGGGAGGGGACTTC
TTGTGGTAAGAGCAAGTGCAGGTATGAAATGCGAAGATTGCCCCAGCTAAAAGTGGACAAGTCCGCTTTGTGAGA
TGAATACTTCTGAGAACTTGACAAGTATCTCTCCATTTTACCATTATGAAAACATCATTAACAAAAACAGTT
TAGATGCCTTCTCTTTTGGAGGAAAAAGGGTGCTTTTTTATTGTATAAAGCAGCGCTTATGTATTTTGATATAC
CATTGTTTGAAGTTCCGCTTTTAGCTGATAGATTCTCAAATATCCTTGATTTTGGATGTTTCTGATGTTTGTGAG
AGAGGTTTCTGGGAAGACTCTTTTTTGGCCTCGGGAAGCAAAATATCAATGTTTGGGTGACTGTGTAAAGC

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FIGURE 158B

TCAGTGTGTAAGAACATCTTTTTGTCTAGGTTTTCTTTCTGCTCTTTATTGAAGACAAACACTCACCAAAAAGAA
AAATAAAAGTTTTTCAGAGAACTAATTTCTTTGGCAAGAGTATTACTTAATATTTTGGCCTCCTAAAGTTTCCC
TAGTTAGTACTCGGACTCCTGTGCTAATTGTCAGCTTACATATCATTGTATAGAGACTGTTTATTCTGTACCAAA
CTGATTTCAAAGTACTACATTGAAAATAAACCGGTGACTGTTTTCTTCATAAAGTTCTGCGTTTGGCATCTTC
ACTCTTTCAAAATGTATCTGTACATCAGAAATGTCACTATTCCAAGTGTCTTTTAGTGTGGCCTTTAGTATGG
CTTCCTTTTAATATTGTACATACATTGTATCTTTGTTTTATGGTAATAAGTAATAAAAATGTAGACTTCAAAAAA
AAAAGCGGCCGCAG

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FIGURE 159

MVVDAANSNGPFPQPVLLHIRDVPPADQEKLFIQKLRQCCVLFDFVSDPLSDLKWKEVKRAALSEMVEYITHNRN
VITEPIYPEVVHMFVNMFRITLPPSSNPTGAEFDPEEDEPTLEAAWPHLQLVYEFFLRFLESPDFQPNIAKKYID
QKFVLQLELFDSEDPREDFLKTTLHRIYGKFLGLRAYIRKQINNIFYRFIYETEHNGIAELLEILGSIINGF
ALPLKEEHKIFLLKVLLPLHKVKSLSVYHPQLAYCVVQFLEKDSTLTEPVVMALLKYWPKTHSPKEVMFLNELEE
ILDVIEPSEFVKIMEPLFRQLAKCVSSPHFQVAERALYYWNNEYIMSLISDNAAKILPIMFPSLYRNSKTHWNKT
IHGLIYNALKLFMEMNQKLFDDCTQQFKAERLKEKLKMKEREEAWVKIENLAKANPQYTVYSQASTMSIPVAMET
DGPLFEDVQMLRKTIVKDEAHQAQKDPKKDRPLALRKSELPQDPHTKKALEAHCRADELASQDGR

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FIGURE 160

CCGGAGGAGTCCGAGAGGAAGCGGAGGCGCGAGCTGGAGGCGGCGGCTCCCGTCGGCCTCCGGCAGGACTGAGCG
CTGGGAGGCCGGAAGGCGGGCGCGCACGGCGGAGAGGCGGGCGGGAGGCCGAGCATATTAATGAAAAGTGCCAT
AAACTGAAAAACCAAACATGAGGGTAGCAGGTGCTGCAAAGTTGGTGGTAGCTGTGGCAGTGTTTTACTGACAT
TTTATGTTATTTCTCAAGTATTTGAAATAAAAATGGATGCAAGTTTAGGAAATCTATTTGCAAGATCAGCATTGG
ACACAGCTGCACGTTCTACAAAGCCTCCCAGATATAAGTGTGGGATCTCAAAGCTTGCCCTGAGAAGCATTG
CTTTTAAATGGCAAGTGGAGCAGCCAACGTGGTGGGACCCAAAATCTGCCTGGAAGATAATGTTTTAATGAGTG
GTGTTAAGAATAATGTTGGAAGAGGGATCAATGTTGCCTTGGCAAATGGAAAAACAGGAGAAGTATTAGACACTA
AATATTTTGACATGTGGGGAGGAGATGTGGCACCATTATTTAGTGTCTGAAGGCCATACAAGATGGAACAATAG
TTTTAATGGGAACATACGATGATGGAGCAACCAAACCTCAATGATGAGGCACGGCGGCTCATTTGCTGATTTGGGGA
GCACATCTATTACTAATCTTGGTTTTAGAGACAACCTGGGTCTTCTGTGGTGGGAAGGGCATTAAAGACAAAAGCC
CTTTTGAACAGCACATAAAGAACAATAAGGATACAAACAAATATGAAGGATGGCCTGAAGTTGTAGAAATGGAAG
GATGCATCCCCCAGAAGCAAGACTAATGGAAATGTGGAGAGAATTGAAGAAAGCGCACTTTCACCTCTTAATGGGA
GAGCTATAAATGGCAGAGCTATGTGTAAATATTTAAGAGCATGCAGCCATCTTGGTGTGTGCATGAGTATTGTC
TCTTTTGATATCAGGATTATTTATTGCTAACGTAAATAGATAGCATTGTAAATAATCATCACAATGATCAAATCA
CTGAACCATGTCTCCGCACATTTCCCTAAAAGTACAATGTTTAGACTGCTATGGTAATACATATTTTAAATTCTA
AAAGCATACACAATGTGTAAGTGAATGGTTTGTGAAAAATATATTGATATATATACTAGTTGCTATGAAAATATC
ATGGAATAATAGGGATTTTAGGGTGGATACTTTATTTTCTTTTATGTTTCTATATGTTGCGTTGTGATGACATTA
TCTTTTAAATTA AAAAGAGATTTGGCTAGTTGTGTGTGTAATGTTACTTTACAGTCCGACTCTCCTGATGTACCT
CTTTTCATGATCTTTTCTTTCCTTCCCAAGAACTGAGGAATGTTTAATATGAAAACATACATCGGATATGTGA
AAAGCACACA AAAATCTTAATGTACACAGTAAAAAAGTAAATATATAAATGTAGATGGCATTTAGGACCACAGC
TTGCTGGATTTGTGTTAGCTATGGGAATAA CTTGATTTTGTATAAGCTATTTAGAGTGAGGCTGGAGGTGGCAGC
TTCACAGAACTGGAGAACCAGGCCAAGTCCCCTCCCCAACCTAATTAGGTCATT CAGGACAGCTAAGTCAGTATA
TTTAGAGCAATACTAGCATACGTTTTTCTTAATTGTTATCAGCATTGACCAAGTGGTTTGG AAGGAGGCATGCTT
TAATATCACAATAATTTTGATTTGTAAACCAAGAAATTAATCCTGTGTTTATCTA ACTTCATAATAGCAATTATT
GCCCCAAGCTATAGTGGCATATTTACAAAAGTTCTTATTACTGGGCGGACTGATAACATTTAAAAAATAATTGTG
TTTGACCCCAAAATGACTTTATACCCAATTCTACATAAAAAATATAGAAGATCTATCTTTTTTTTGTACCTTCAGAT
GTTCACTAAATAACTCAGTTTTTAAGCAGAAGTTTT CAGGGCATTAAATATATGTTGTGTATGAAGTATCTCAA
CTGGAACATAAAATTTAGTGATCAAAC TGCCATT CACAGTGTAAGGCAGCACTTAAATTT CGAACCTAAAGTTTAG
ATGCATTGTATAAAAAAACCTAAAAGCAGTATCTGTTATTTAGCTGTAAACCAAGTTGGAAGCTATTCGGATAAT
TTCTTAAATATTGATGAACTTTGGAGTACTGTTTCTTCTTCAAAC TGAATGTAATTAATTCATGAATAAATGCA
CCTTATATGTTTAAACAATCTTTGTATACTTTTGGGATTTTTGGTGCTTATATGCTAAATCACATTCAGCATGTG
TATTTTGACATTTAAATACTTCCCTCAATTCTGTAAATTA AAAAGAATAGTTATTTTACAGTTCCAGGGATTGTG
AAATAAATGTTGCAGTTTTTTTAAATAATGAAATAAATACTCTTGGTTTTGCTTTGTGAAAAAAAAAAAAAAAAA

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FIGURE 161

MRVAGAAKLVVAVAVFLLTFYVISQVFEIKMDASLGNLFARSALDTAARSTKPPRYKCGISKACPEKHFAFKMAS
GAANVVGPKICLEDNVLMSGVKNNVGRGINVALANGKTGEVLDTKYFDMWGGDVAPFIEFLKAIQDGTIVLMGT
DDGATKLNDEARRLIADLGSTSITNLGFRDNWVFCGGKGIKTKSPFEQHIKNNKDTNKYEGWPEVVEMEGCIPQK
QD

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FIGURE 162

CCCAGGCGCAGCCAATGGGAAGGGTCGGAGGCATGGCACAGCCAATGGGAAGGGCCGGGGCACCAAAGCCAATGG
GAAGGGCCGGGAGCGCGCGGGAGATTAAAGGCTGCTGGAGTGAGGGGTCGCCGTGCACCCTGTCCCAG
CCGTCTGTCTGGCTGCTCGCTCTGCTTCGCTGCGCCTCCACTATGCTCTCCCTCCGTGTCCCGCTCGCGCCCA
TCACGGACCCGCAGCAGCTGCAGCTCTCGCCGCTGAAGGGGCTCAGCTTGGTCGACAAGGAGAACACGCCGCCGG
CCCTGAGCGGGACCCGCGTCTGGCCAGCAAGACCGCGAGGAGGATCTTCCAGGAGCCCACGGAGCCGAAAACTA
AAGCAGCTGCCCCGGCGTGGAGGATGAGCCGCTGCTGAGAGAAAACCCCGCCGCTTTGTTCATCTTCCCCATCG
AGTACCATGATATCTGGCAGATGTATAAGAAGGCAGAGGCTTCCTTTTGGACCGCCGAGGAGGTTGACCTCTCCA
AGGACATTCAGCACTGGGAATCCCTGAAACCCGAGGAGAGATATTTTATATCCCATGTTCTGGCTTTCTTTGCAG
CAAGCGATGGCATAGTAAATGAAAACCTTGGTGGAGCGATTAGCCAAGAAGTTCAGATTACAGAAGCCCCGTGTT
TCTATGGCTTCCAAATTGCCATGGAAAACATACATTCTGAAATGTATAGTCTTCTTATTGACACTTACATAAAAG
ATCCCAAAGAAAGGGAATTTCTCTTCAATGCCATTGAAACGATGCCTTGTGTCAAGAAGAAGGCAGACTGGGCCT
TGCGCTGGATTGGGGACAAAGAGGCTACCTATGGTGAACGTGTTGTAGCCTTTGCTGCAGTGAAGGCATTTTCT
TTTCCGTTCTTTTGGCTCGATATTCTGGCTCAAGAAACGAGGACTGATGCCTGGCCTCACATTTTCTAATGAAC
TTATTAGCAGAGATGAGGGTTTACACTGTGATTTTGGCTGCTGATGTTCAAACACCTGGTACACAAACCATCGG
AGGAGAGAGTAAGAGAAATAATTATCAATGCTGTTCCGATAGAACAGGAGTTCCTCACTGAGGCCTTGCTGTGA
AGCTCATTGGGATGAATTGCACTCTAATGAAGCAATACATTGAGTTTGTGGCAGACAGACTTATGCTGGAACCTGG
GTTTTAGCAAGGTTTTTCAAGTAGAGAACCCATTTGACTTTATGGAGAATATTTCACTGGAAGGAAAGACTAACT
TCTTTGAGAAGAGAGTAGGCGAGTATCAGAGGATGGGAGTGATGTCAAGTCCAACAGAGAATTCTTTTACCTTGG
ATGCTGACTTCTAAATGAAGTGAAGATGTGCCCTTACTTGGCTGATTTTTTTTTTCCATCTCATAAGAAAAATCA
GCTGAAGTGTTACCAACTAGCCACACCATGAATTGTCCGTAATGTTCAATTAACAGCATCTTTAAACTGTGTAGC
TACCTCACAAACAGTCTCTGTCTGTTTATAGTCTGGTAGTATCACCTTTTGCCAGAAGGCCTGGCTGGCTGTGAC
TTACCATAGCAGTGACAATGGCAGTCTTGGCTTTAAAGTGAGGGGTGACCCTTTAGTGAGCTTAGCACAGCGGGA
TTAAACAGTCTTTAAACCAGCACAGCCAGTTAAAGATGCAGCCTCACTGCTTCAACGCAGATTTTAATGTTTAC
TTAAATATAAACCTGGCACTTTACAAACAAATAAACATTGTTTTGTACTCACGGCGGCGATAATAGCTTGATTTA
TTTGGTTTTCTACACCAATACTTCTCTGACCCTAATGGGAGCCAATTCACAATTCATAAGTGAATAAAGTA
AGTTAACTTGTGTAGACTAAGCATGTAATTTTAAAGTTTTATTTAATGAATTAATAATTTTGTAAACCACTT
TAAAGTCAGTCTGTGTATACCTAGATATTAGTCAGTTGGTGCCAGATAGAAGACAGGTTGTGTTTTTATCCTGT
GGCTTGTGTAGTGTCTGGGATTCTCTGCCCCCTCTGAGTAGAGTGTGTGGGATAAAGGAATCTCTCAGGGCAA
GGAGCTTCTTAAGTTAAATCACTAGAAATTTAGGGGTGATCTGGGCCTTCATATGTGTGAGAAGCCGTTTCATTT
TATTTCTCACTGTATTTTCTCAACGTCTGGTTGATGAGAAAAAATTTCTGAAGAGTTTTCATATGTGGGAGCTA
AGGTAGTATTGTAAATTTCAAGTCATCCTTAAACAAAATGATCCACCTAAGATCTTGCCCTGTTAAGTGGTGA
AATCAACTAGAGGTGGTTCCTACAAGTTGTTTATTCTAGTTTTGTTGGTGTAAAGTAGGTTGTGTGAGTTAATTC
ATTTATATTTACTATGTCTGTTAAATCAGAAATTTTTTATTATCTATGTTCTTCTAGATTTTACCTGTAGTTTCT
ACTTCAGTCACCCAGTGTCTTATTCTGGCATTGTCTAAATCTGAGCATTGTCTAGGGGGATCTTAAACTTTAGTA
GGAAACCATGAGCTGTTAATACAGTTTCCATTCAAATATTAATTTTCAAGATGAAACATAATTTTTTTTTTTTTT
TGAGATGGAGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCGCGATTTTGGCTCACTGTAACCTCCATCTCC
TGGGTTCAAGCAATTTCTCTGTCTCAGCCTCCCTAGTAGCTGGGACTGCAGGTATGTGCTACCACACCTGGCTAA
TTTTTGTATTTTTTAGTAGAGATGGAGTTTACCATATTGGTCAGGCTGGTCTTGAACCTCCTGACCTCAGGTGATC
CACCCACCTCGGCCTCCCAAAGTGCTGGGGATTGCAGGCGTGATAAACAAATATTCTTAATAGGGCTACTTTGAA
TTAATCTGCCTTTATGTTTGGGAGAAGAAAGCTGAGACATTGCATGAAAGATGATGAGAGATAAATGTTGATCTT
TTGGCCCCATTTGTTAATTGTATTAGTATTTGAACGTCGTCCTGTTTATTGTTAGTTTTCTTCATCATTTATTG
TATAGACAATTTTTAAATCTCTGTAATATGATACATTTTCTATCTTTTAAAGTTATTGTTACCTAAAGTTAATCC
AGATTATATGGTCTTATATGTGTACAACATTTAAATGAAAGGCTTTGTCTTGCAATTGTGAGGTACAGGCGGAAG
TTGGAATCAGGTTTTAGGATTCTGTCTCTCATTAGCTGAATAATGTGAGGATTAACCTCTGCCAGCTCAGACCAT
TTCTAATCAGTTGAAAGGGAAACAAGTATTTAGTCTCAAATTTGAATAATGCACAAGTCTTAAGTGATTAATA
TAAACTGTTCTTATGTC

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FIGURE 163

MLSLRVPLAPITDPQQLQLSPLKGLSLVDKENTPPALSGTRVLASKTARRIFQEPTEPKTKAAAPGVEDEPLLRE
NPRRFVIFPIEYHDIWQMYKKAEEASFWTAEVDLSKDIQHWESLKPEERYFISHVLAFFAASDGI V NENLVERFS
QEVQITEARCFYGFQIAMENIHSEMYSLIDITYIKDPKEREFLFNAIETMPCVKKKADWALRWIGDKEATYGERV
VAFAAVEGIFFSGSFASIFWLKKRGLMPGLTFSNELISRDEGLHCDFACLMFKHLVHKPSEERVREIIINAVRIE
QEFLTEALPVKLIGMNCTLMKQYIEFVADRLMLELGF SKVFRVENPFDFMENISLEGKTNFFEKRVGEYQRMGVM
SSPTENSFTLDADF

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FIGURE 164

GAATTCGGGCGGTCTCTCGGAGACACGCGGCGGTGTCCTGTGTTGGCCATGGCCGACTACCTGATTAGTGGGGGCA
CGTCCTACGTGCCAGACGACGGACTCACAGCACAGCAGCTCTTCAACTGCGGAGACGGCCTCACCTACAATGACT
TTCTCATTCTCCCTGGGTACATCGACTTCACTGCAGACCAGGTGGACCTGACTTCTGCTCTGACCAAGAAAATCA
CTCTTAAGACCCCACTGGTTTCTCTCCCATGGACACAGTCACAGAGGCTGGGATGGCCATAGCAATGGCGCTTA
CAGGCGGTATTGGCTTCATCCACCACAACCTGTACACCTGAATTCCAGGCCAATGAAGTTCGGAAAGTGAAGAAAT
ATGAACAGGGATTCAATCACAGACCCTGTGGTCCTCAGCCCCAAGGATCGCGTGCGGGATGTTTTTGAGGCCAAGG
CCCGGCATGGTTTCTGCGGTATCCCAATCACAGACACAGGCCGGATGGGGAGCCGCTTGGTGGGCATCATCTCCT
CCAGGGACATTGATTTTCTCAAAGAGGAGGAACATGACTGTTTCTTGGAAGAGATAATGACAAAGAGGGAAGACT
TGGTGGTAGCCCCCGCAGCATCACACTGAAGGAGGCAAATGAAATTCTGCAGCGCAGCAAGAAGGGAAAGTTGC
CCATTGTAAATGAAGATGATGAGCTTGTGGCCATCATTGCCCCGACAGACCTGAAGAAGAATCGGGACTACCCAC
TAGCCTCCAAAGATGCCAAGAAACAGCTGCTGTGTGGGGCAGCCATTGGCACTCATGAGGATGACAAGTATAGGC
TGGACTTGCTCGCCCAGGCTGGTGTGGATGTAGTGGTTTTGGACTCTTCCCAGGGAAATTCATCTTCCAGATCA
ATATGATCAAGTACATCAAAGACAAATACCCTAATCTCCAAGTCATTGGAGGCAATGTGGTCACTGCTGCCCAGG
CCAAGAACCTCATTGATGCAGGTGTGGATGCCCTGCGGGTGGGCATGGGAAGTGGCTCCATCTGCATTACGCAGG
AAGTGCTGGCCTGTGGGCGGCCCAAGCAACAGCAGTGTACAAGGTGTCAGAGTATGCACGGCGCTTTGGTGTTC
CGGTCATTGCTGATGGAGGAATCCAAATGTGGGTCAATTTGCGAAAGCCTTGGCCCTTGGGGCCTCCACAGTCA
TGATGGGCTCTCTCCTGGCTGCCACCACTGAGGCCCTGGTGAATACTTCTTTTCCGATGGGATCCGGCTAAAGA
AATATCGCGGTATGGGTTCTCTCGATGCCATGGACAAGCACCTCAGCAGCCAGAACAGATATTTTCAAGTGAAGCTG
ACAAAATCAAAGTGGCCCAGGGAGTGTCTGGTGTGTGCAGGACAAAGGGTCAATCCACAAATTTGTCCCTTACC
TGATTGCTGGCATCCAACACTCATGCCAGGACATTGGTGCCAAGAGCTTGACCCAAGTCCGAGCCATGATGTACT
CTGGGGAGCTTAAGTTTGAGAAGAGAACGTCTCAGCCCAGGTGGAAGGTGGCGTCCATAGCCTCCATTCTGTATG
AGAAGCGGCTTTTCTGAAAAAGGGATCCAGCACACCTCCTCGGTTTTTTTTTCAATAAAAGTTTAGAAAGACCCGA
ATTC

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FIGURE 165

MADYLISSGGTSYVPDDGLTAQQLFNCGDGLTYNDFLILPGYIDFTADQVDLTSALTKKITLKTPLVSSPMDTVTE
AGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVVLSPKDRVRDVFEAKARHGFCGIPITDTGRM
GSRLVGISSRDIDFLKEEEHDCFLLEEIMTKREDLVVAPRSITLKEANEILQRSKKGKLP IVNEDDELVAIIART
DLKKNRDYPLASKDAKKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI
GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEV LACGRPQATAVYKVSEYARREFGVPVIADGGIQNVGHIK
ALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAMDKHLSSQNRYFSEADKIKVAQGVSGAVQDK
GSIHKFVPYLIAGIQHSCQDIGAKSLTQVRAMYSGELKF EKRTSSAQVEGGVHSLHSYEKRLF

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FIGURE 166

AGAGCGATCATGTCGCACAAACAAATTTACTATTTCGGACAAATACGACGACGAGGAGTTTGAGTATCGACATGTC
ATGCTGCCCCAAGGACATAGCCAAGCTGGTCCCTAAAACCCATCTGATGTCTGAATCTGAATGGAGGAATCTTGGC
GTTTCAGCAGAGTCAGGGATGGGTCCATTATATGATCCATGAACCAGAACCTCACATCTTGCTGTTCCGGCGCCCA
CTACCCAAGAAACCAAAGAAATGAAGCTGGCAAGCTACTTTTCAGCCTCAAGCTTTACACAGCTGTCCTTACTTC
CTAACATCTTTCTGATAACATTATTATGTTGCCTTCTTGTTTCTCACTTTGATATTTAAAAGATGTTCAATACAC
TGTTTGAATGTGCTGGTAACTGCTTTGCTTCTTGAGTAGAGCCACCACCACCATAGCCCAGCCAGATGAGTGCTC
TGTGGACCCACAGCCTAAGCTGAGTGTGACCCAGAAGCCACGATGTGCTCTGTATCCAGAACACACTTGGCAGA
TGGAGGAAGCATCTGAGTTTGAGACCATGGCTGTTACAGGGATCATGTAACTTGCTGTTTTTGTGTTTTTCTGCC
GGGTGTTGTATGTGTGGTGAATTTGCGGATTTATGTTTCAGTGTACTGGAACTTTCCATTTTATTCAAGAAATCT
GTTTCATGTAAAAGCCTTGATTAAAGAGGAAGTTTTTATAAT

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FIGURE 167

MSHKQIYYSDKYDDEEFYRHVMLPKDIAKLVPKTHLMSESEWRNLGVQQSQGWVHYMIHEPEPHILLFRRPLPK
KPKK

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FIGURE 168

GCGGCGCTCGCGCCAAGGGACGTGTTTCTGCGCTCGCGTGGTCAATGGAGGCGCTGCCGCTGCTAGCCGCGACAAC
TCCGGACCACGGCCGCCACCGAAGGCTGCTTCTGCTGCCGCTACTGCTGTTCCCTGCTGCCGGCTGGAGCTGTGCA
GGGCTGGGAGACAGAGGAGAGGCCCCGACTCGCGAAGAGGAGTGCCACTTCTACGCGGGTGGACAAGTGTACCC
GGGAGAGGCATCCCGGGTATCGGTGCGCGACCACTCCCTGCACCTAAGCAAAGCGAAGATTTCCAAGCCAGCGCC
CTACTGGGAAGGAACAGCTGTGATCGATGGAGAATTTAAGGAGCTGAAGTTAACTGATTATCGTGGGAAATACTT
GGTTTTCTTCTTCTACCCACTTGATTTACATTTGTGTGTCCAACGAAATTATCGCTTTTGGCGACAGACTTGA
AGAATTCAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTTGATTCACAGTTTACCCATTTGGCCTGGATTAA
TACCCCTCGAAGACAAGGAGGACTTGGGCCAATAAGGATTCCACTTCTTTCAGATTTGACCCATCAGATCTCAAA
GGACTATGGTGTATACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTTCATTATTGATGACAAAGGAATCCT
AAGACAAATTACTCTGAATGATCTTCCTGTGGGTAGATCAGTGGATGAGACACTACGTTTGGTTCAAGCATTCCA
GTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAACCTGGTAGTGAAACAATAATCCCAGATCCAGC
TGGAAAGCTGAAGTATTTGATAAACTGAATTGAGAAATACTTCTTCAAGTTATGATGCTTGAAAGTTCTCAATA
AAGTTCACGGTTTCATTACCA

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FIGURE 169

MEALPLLAATTPDHGRHRLLLLPLLLFLLPAGAVQGWETEERPRTRREECHFYAGGQVYPGEASRVSVADHSLH
LSKAKISKPAPYWEGTAVIDGEFKELKLTDIRGKYLVFFFYPLDFTFVCPTETIAFGDRLEEFRSINTEVVACSV
DSQFTHLAWINTPRRQGGLGPIRIPLLSDLTHQISKDYGVYLED SGHTLRGLFIIDDKGILRQITLNDLPVGRSV
DETLRLVQAFQYTDKHGEVCPAGWKPGSETIIPDPAGKLKYFDKLN

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FIGURE 170

GGAAAAAAGCGACTTGTGGCGGTGCGAGCGTGGCGCAGGCGAATCCTCGGCCTAAGCAAATATGACCTCGCGGC
GGCAGCGGAGCCGGGCGCCGGCAGCCAGCACCTGGAGGTCCGCGACGAGGTGGCCGAGAAGTGCCAGAACTGTT
CCTGGACTTCTTGGAGGAGTTTCAGAGCAGCGATGGAGAAATTAATACTTGCAATTAGCAGAGGAACTGATTCTG
TCCTGAGAGAAACACATTGGTTGTGAGTTTTGTGGACCTGGAACAATTAACCAGCAACTTTCCACCACCATTCA
AGAGGAGTTCTATAGAGTTTACCCTTACCTGTGTGCGGGCCTTGAAAACATTTCGTCAAAGACCGTAAAGAGATCCC
TCTTGCCAAGGATTTTTATGTTGCATTCCAAGACCTGCCTACCAGACACAAGATTCGAGAGCTCACCTCATCCAG
AATTGGTTTGTCTCACTCGCATCAGTGGGCAGGTGGTGC GGACTCACCCAGTTCACCCAGAGCTTGTGAGCGGAAC
TTTTCTGTGCTTGGACTGTGAGACAGTGATCAGGGATGTAGAACAGCAGTTCAAATACACACAGCCAAACATCTG
CCGAAATCCAGTTTGTGCCAACAGGAGGAGATTCTTACTGGATACAAATAAATCAAGATTTGTTGATTTTCAAAA
GGTTCGTATTCAAGAGACCCAAGCTGAGCTTCCTCGAGGGAGTATCCCCGCGAGTTTAGAAGTAATTTTAAGGGC
TGAAGCTGTGGAATCAGCTCAAGCTGGTGACAAGTGTGACTTTACAGGGACACTGATTGTTGTGCCTGACGTCTC
CAAGCTTAGCACACCAGGAGCACGTGCAGAACTAATTCCCCTGTGAGTGGTGTGATGGATATGAGACAGAAGG
CATTCGAGGACTCCGGGCCCTTGGTGTAGGGACCTTTCTTATAGGCTGGTCTTTCTTGCTGTGTTGCGCC
AACCAACCCAAGGTTTGGGGGGAAGAGCTCAGAGATGAGGAACAGACAGCTGAGAGCATTAAAGAACCAATGAC
TGTGAAAGAAATGGGAGAAAGTGTGTTGAGATGAGTCAAGATAAAAATCTATACCACAATCTTTGTACCAGCCTGTT
CCCTACTATACATGGCAATGATGAAGTAAAACGGGGTGTCTGTGCTGATGCTCTTTGGTGGCGTTCCAAAGACAAC
AGGAGAAGGGACCTCTCTTCGAGGGGACATAAATGTTTGCATTGTTGGTGACCCAAGTACAGCTAAGAGCCAATT
TCTCAAGCACGTGGAGGAGTTTCAGCCCCAGAGCTGTCTACACCAGTGGTAAAGCGTCCAGTGTCTGCTGCTTAAC
AGCAGCTGTTGTGAGAGATGAAGAATCTCATGAGTTTGTCAATTGAGGCTGGAGCTTTGATGTTGGCTGATAATGG
TGTGTGTTGTATTGATGAATTTGATAAGATGGACGTGCGGGATCAAGTTGCTATTTCATGAAGCTATGGAACAGCA
GACCATATCCATCACTAAAGCAGGAGTGAAGGCTACTCTGAACGCCCGGACGTCCATTTTGGCAGCAGCAAACCC
AATCAGTGGACACTATGACAGATCAAAATCATTGAAACAGAATATAAATTTGTCAGCTCCCATCATGTCCCGATT
CGATCTCTTCTTTATCCTTGTGGATGAATGTAATGAGGTTACAGATTATGCCATTGCCAGGCGCATAGTAGATTT
GCATTCAAGAATTGAGGAATCAATTGATCGTGTCTATTCCCTCGATGATATCAGAAGATATCTTCTCTTTGCAAG
ACAGTTTAAACCCAAGATTTCCAAAGAGTCAGAGGACTTCATTGTGGAGCAATATAAACATCTCCGCCAGAGAGA
TGGTTCTGGAGTGACCAAGTCTTCATGGAGGATTACAGTGCGACAGCTTGAGAGCATGATTGCTCTCTCTGAAGC
TATGGCTCGGATGCACTGCTGTGATGAGGTCCAACCTAAACATGTGAAGGAAGCTTTCCGGTTACTGAATAAATC
AATCATCCGTGTGGAACACCTGATGTCAATCTAGATCAAGAGGAAGAGATCCAGATGGAGGTAGATGAGGGTGC
TGGTGGCATCAATGGTCATGCTGACAGCCCTGCTCCTGTGAACGGGATCAATGGCTACAATGAAGACATAAATCA
AGAGTCTGCTCCCAAAGCCTCCTTAAGGCTGGGCTTCTCTGAGTACTGCCGAATCTCTAACCTTATTGTGCTTCA
CCTCAGAAAGGTGGAAGAAGAAGAGGACGAGTCAGCATTAAAGAGGAGCGAGCTTGTTAACTGGTACTTGAAGGA
AATCGAATCAGAGATAGACTCTGAAGAAGAACTTATAAATAAAAAAAGAATCATAGAGAAAGTTATTTCATCGACT
CACACACTATGATCATGTTCTAATTGAGCTCACCCAGGCTGGATTGAAAGGCTCCACAGAGGGAAAGTGAGAGCTA
TGAAGAAGATCCCTACTTGGTAGTTAACCCTAACTACTTGCTCGAAGATTGAGATAGTGAAAGTAACTGACCAGA
GCTGAGGAAGTGTGGCACAGCACCTCGTGGCCTGGAGCCTGGCTGGAGCTCTGCTAGGGACAGAAAGTGTCTG
AAGTGATGCTTCCAGGATTTGTTTTTCAGAAACAAGAATTGAGTTGATGGTCTATGTGTACATTTCATCACAGGT
TTCATACCAACACAGGCTTCAGCACCTTCCCTTGGTGTGTTTCTGTCCAGTGAAGTTGGAACCAATAATGTGT
AGTCTCTATAACCAATACCTTTGTTTTTCATGTGTAAGAAAAGGCCATTACTTTTAAGGTATGTGCTGTCTTATT
GAGCAAATAACTTTTTTTCAATTGCCAGCTACTGCTTTTATTTCATCAAATAAAATAACTTGTCTG

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FIGURE 171

MDLAAAAEPGAGSQHLEVRDEVAEKCQKFLDFLEEFQSSDGEIKYLQLAEELIRPERNTLVVSFVDLEQFNQQL
STTIQEEFYRVYPYLCRALKTFVKDRKEIPLAKDFYVAFQDLPTRHKIRELTSSRIGLLTRISGQVVRTHPVHPE
LVSGTFLCLDCQTVIRDVEQQFKYTQPNICRNPVCANRRRFLLDTNKSRFVDFQKVRIQETQAELPRGSIPRSLE
VILRAEAVESAQAGDKCDFGTGLIVVPDVSKLSTPGARAETNSRVSGVDGYETEGIRGLRALGVRDLSYRLVFLA
CCVAPTNPFRFGGKELRDEEQTAESIKNQMTVKEWEKVFEMSQDKNLYHNLCTSLFPTIHGNDEVKRGVLLMLFGG
VPKTTGEGTSLRGDINVCIVGDPSTAKSQFLKHVEEFSPRAVYTSKGASSAAGLTAAVVRDEESHEFVIEAGALM
LADNGVCCIDEFDKMDVRDQVAIHEAMEQQTISITKAGVKATLNARTSILAAANPISGHYDRSKSLKQNINLSAP
IMSREFDLFFILVDECNEVTDYAIARRIVDLHSRIEESIDRVYSLDDIRRYLLFARQFKPKISKESEDFIVEQYKH
LRQRDGSQVTKSSWRITVRQLESMIRLSEAMARMHCCDEVQPKHVKEAFRLLNKSIIRVETPDVNLDQEEETQME
VDEGAGGINGHADSPAPVNGINGYNEDINQESAPKASLRLGFSEYCRISNLIVLHLRKVEEEEDSALKRSELVN
WYLKEIESEIDSEEELINKKRIIEKVIHRLTHYDHVLIELTQAGLKGSTEGSESYEEDPYLVVNPNYLLED

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FIGURE 172

CTGGTCCCGAGCACGAGCTGTGAGGGGATTCACTTGTGTGCGGAACCTCCTCGGAACCATGCGCGTCCCTTTCCCTT
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT
GCCATCGCCATTGGAGACTTGGTAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAAACATTGGTGTTGACAATCCAGCAGCT
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGATGGCACTACCTCTGTTACCGTTTTAGCA
GCAGAATTATTAAGGGAAGCAGAATCTTTAATTGCAAAAAAGATTTCATCCACAGACCATCATAGCGGGTTGGAGA
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCGGT
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAACTTCTTACTCATCACAAGACCACCTTTACAAAG
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA
GGAAGTTTGGCAGATTCTTATTTAGATGAAGGCTTCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA
ATTGAAAATGCTAAAATTCTTATTGCAATACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCGCCGGGT
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGCT
GCTGGTGTCATGGCTATTGAGCATGCAGATTTTGCAGGTGTGGAACGCCTAGCTCTTGTCACAGGTGGTGAAATT
GCCTCTACCTTTGATCACCCAGAACTGGTGAAGCTTGGAAGTTGCAAACTTATCGAGGAAGTCATGATTGGAGAA
GACAACTCATTCACTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTACCATTGTTTTGCGTGGTGCCACTCAACAA
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTTGTGTTCTTGCGCAAACTGTAAAGGACTCTAGAACA
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAAAGTTGCCAACCATCATAGCTGACAATGCAGGCTAT
GACAGTGACAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT
CACCACCCCTGTTAAAGCATTCCCACGTGCTGTCGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCCATATATCCTTAAGTTTGGATATTTAGCTGACCTT
CGCTTTAACATAGGTCTAATTTATTTGCCGTGTCATTTTCATACAAATCAGTTGATTTAAAGGAGTTTCAATTCG
CATACTGGGCATTAAAAATAAAAAATTTGAACAATGAAAGGAAAAAAGGAGAAAAA

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FIGURE 173

MASLSLAPVNIFKAGADEERAETARLTSFIGAIAIGDLVKSTLGPKGMDKILLSSGRDASLMVTNDGATILKNIG
VDNPAAKVLVDMSRVQDDEVGDGTTSTVTLAAELLREAESLIAKKIHPQTIIAGWREATKAAREALLSSAVDHGS
DEVKFRQDLMNIAGTTLSKLLTHHKDHFTKLAVEAVLRLKSGNLEAIHIIKKLGGSLADSYLDEGFLLDKKIG
VNQPKRIENAKILIAN TGMDTDKIKIFGSRVRVDSTAKVAEIEHAEKEKMKEKVERILKHGINCFINRQLIYNYP
EQLFGAAGVMAIEHADFAGVERLALVTGGEIASTFDHPELVKLGSKLIEEVMIGEDKLIHFSGVALGEACTIVL
RGATQQILDEAERSLHDALCVLAQTVKDSRTVYGGGCSEMLMAHAVTQLANRTPGKEAVAMESYAKALRMLPTII
ADNAGYDSADLVAQLRAAHSEGNTTAGLDMREGTIGDMAILGITESFQVKRQVLLSAAEAAEVILRVDNIIKAAP
RKRVPDHHPC

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FIGURE 174

GCCTGAGTGAGTCTCTGGCGTCCCAAATTGCCTGTTTTTCTCGCAGGCTCTATTCCGTTTCGCTGGTTCGCCACCT
CAGGGGAACGATGGCCATGGAGTCCACAGCCACTGCCGCCGTCGCCGCGGACGTGGTTTCTGCCGACAAAATTGA
AGATGTCCCTGCTCCTTCTACATCTGCAGATAAAGTGGAGAGTCTGGATGTGGATAGTGAAGCTAAGAACTATT
GGGTTTAGGACAGAAACATCTGGTGATGGGGGATATTCCAGCAGCTGTCAATGCATTCCAGGAAGCAGCTAGTCT
TTTAGGTAAGAAGTATGGAGAGACAGCTAATGAGTGTGGAGAAGCCTTCTTTTTCTATGGGAAATCACTTCTGGA
GTTGGCAAGAATGGAGAATGGTGTGTTGGGAAACGCCTTGAAGGTGTGCATGTGGAAGAGGAAGAAGGAGAAAA
AACAGAAGATGAATCTCTGGTAGAAAAATAATGATAACATAGATGAGGAAGCAAGGGAAGAGTTGAGAGAACAGGT
TTATGACGCCATGGGAGAAAAAGAAGCCAAAAAACAGAAGACAAGTCTTTGGCAAAGCCTGAAACTGATAA
AGAACAGGACAGTGAAATGGAGAAGGGTGGAAAGAGAAGATATGGATATAAGTAAATCTGCAGAGGAGCCACAGGA
AAAAGTTGACTTGAAGTCTAGATTGGTTAACTGAAACCTCTGAAGAGGCAAAAGGAGGAGCAGCACCAGAAGGACC
GAATGAAGCTGAGGTCACTTCTGGGAAGCCAGAACAGGAAGTACCAGATGCTGAGGAAGAAAAATCAGTTTCTGG
AACTGATGTCCAAGAAGAGTGCAGAGAAAAAGGAGGTGAGGAGAAGCAGGGAGAGGTAATTGTGAGCATAGAGGA
GAAGCCAAAAGAAGTTTTCAGAAGAGCAGCCTGTGGTGACTCTAGAAAAGCAGGGCACTGCAGTGGAGGTAGAAGC
AGAGTCTTTAGACCCGACAGTCAAGCCAGTGGATGTGGGTGGGGACGAGCCAGAGGAGAAGGTAGTTACCTCTGA
AAACGAGGCAGGAAAGGCGGTTCTTGAACAACCTGGTAGGTCAAGAAGTACCACCTGCTGAAGAGTCACCAGAGGT
GCAAACAGAGGCTGCAGAGGCCTCAGCTGTAGAGGCTGGATCAGAAGTCTCTGAAAAGCCTGGGCAGGAGGCTCC
AGTTCTCCCTAAGGATGGTGCAGTCAATGGACCGTCAGTTGTAGGAGATCAGACTCCTATTGAACCACAGACTTC
TATAGAAAGACTGACAGAAACAAAAGATGGCTCAGGACTAGAGGAGAAGGTGAGGGCAAAGCTGGTTCCCTAGTCA
GGAGGAGACTAAGCTGTCTGTAGAAGAGTCTGAGGCAGCTGGAGATGGGGTTGATACCAAGGTAGCCCAGGGAGC
TACTGAGAAATCACCTGAAGACAAAGTTCAGATAGCTGCTAATGAAGAGACACAAGAGAGAGAAGAACAGATGAA
AGAGGGTGAAGAACTGAAGGCTCGGAAGAGGATGATAAAGAAAATGATAAGACTGAAGAAATGCCAAATGATTC
AGTCTTGAAGAACAGTCTCTTCAAGAAAATGAGGAGGAGGAGATTGGGAACCTAGAGCTTGCCTGGGATATGCT
GGATTTAGCAAAGATCATTTTTTAAAAGGCAAGAAACAAAAGAAGCACAGCTTTATGCTGCCCAGGCACATCTTAA
ACTCGGAGAAGTTAGTGTGTAATCTGAAAACCTATGTGCAAGCTGTGGAGGAGTTCCAGTCTGCTTAACCTGCA
GGAACAGTACCTGGAAGCCACGACCGTCTGCTTGCAGAGACCCACTACCAGCTGGGCTTGGCTTATGGGTACAA
CTCTCAGTATGATGAGGCAGTGGCACAGTTCAGCAAATCTATTGAAGTCATTGAGAACAGAAATGGCTGTACTAAA
CGAGCAGGTGAAGGAGGCTGAAGGATCGTCTGAATACAAGAAAGAAATTGAGGAACTAAAGGAACTGCTACCCGA
AATTAGAGAGAAGATAGAAGATGCAAAGGAGTCTCAGCGTAGTGGGAATGTAGCTGAACTGGCTCTGAAAGCTAC
TCTGGTGGAGAGTTCTACTTCAGGTTTCACTCCTGGTGGAGGAGGCTCTTCAGTCTCCATGATTGCCAGTAGAAA
GCCAACAGACGGTGCTTCTCATCAAATTTGTGTGACTGATATTTCCACCTTGTGAGAAAGAAGAGGAAACCAGA
GGAAGAGAGTCCCCGGAAGATGATGCAAAGAAAAGCCAAACAAGAGCCGAGGTGAACGGAGGCAGTGGGGATGC
TGTCCCGAGTGGAAATGAAGTTTCGGAAAACATGGAGGAGGAGGCTGAGAATCAGCTGAAACGCGGAGCAGCAGT
GGAGGGGACACTGGAGGCTGGAGCTACAGTTGAAAGCACTGCATGTTAAGAGGGGGCACAGCCTCCTCCCAAGGG
AAAGTGTTTTTGTATATAATGTATTTTTTCACTTTTGGAGGATTCTTTTTGTATAACTTCAATAAAGATTGTAAG
CAAAAAAAAAA

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FIGURE 175

MAMESTATAA VAADVVSADKIEDVPAPSTSADKVESLDVDSEAKKLLGLGQKHLVMGDIPAAVNAFQEAASLLGK
KYGETANECGEAFFFYGKSLLELARMENGVLGNALEGVHVVEEEEGEKTEDESLVENNDNIDEEAREELREQVYDA
MGEKEEAKKTEDKSLAKPETDKEQDSEMEKGGREDMDISKSAEEPQEKVDLTLDWLTETSEEAKGGAPEGPNEA
EVTSGKPEQEVPDAAEEKSVSGTDVQEECREKGGQEKQGEVIVSIEEKPKEVSEEQPVVTLEKQGTAVEVEAESL
DPTVKPVDVGGDEPEEKVVTSENEAGKAVLEQLVGQEVPPAEESPEVQTEAAEASAVEAGSEVSEKPGQEAPVLP
KDGAVNGPSVVG DQTP IEPQTSIERLTETKDGSGLEEKVRAKLVP SQEETKLSVEESEAAGDGVDTKVAQGATEK
SPEDKVQIAANEETQEREEQMKEGEETEGSEEDDKENDKTEEMPND SVLENKSLQENEEEEIGNLELAWDMLDLA
KIIFKRQETKEAQLYAAQHLKLGEVSVESENYVQAVEEFQSCNLQEQYLEAHDRLLAETHYQLGLAYGYNSQY
DEAVAQFSKSIEVIENRMAVLNEQVKEAEGSSEYKKEIEELKELLPEIREKIEDAKESQORSGNVAELALKATLVE
SSTSGFTPGGGGSSVSMIASRKPTDGASSSNCVTDISHLVRRKKRKPEEESPRKDDAKKAKQEPEVNGGSGDAVPS
GNEVSENMEEEAENQLKRGA AVEGTLEAGATVESTAC

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FIGURE 176

GACTCCTAGGGGCTTGCAGACCTAGTGGGAGAGAAAGAACATCGCAGCAGCCAGGCAGAACCCAGGACAGGTGAGG
TGCAGGCTGGCTTTTCTCTCGCAGCGCGGTGTGGAGTCCGTGCTCCTCAGGGCTTTTCGGAGCCTGGATCCTC
AAGGAACAAGTAGACCTGGCCGCGGGGAGTGGGGAGGGAAGGGGTGTCTATTGGGCAACAGGGCGGCAAAGCCCT
GAATAAAGGGGCGCAGGGCAGGCGCAAGTGCAGAGCCTTCGTTTGCCAAGTCGCCTCCAGACCGCAGACATGAAA
CTTGTCTTCTCGTCTGCTGTTCTCGGGGCCCTCGGACTGTGTCTGGCTGGCCGTAGGAGAAGGAGTGTTCAG
TGGTGCGCCGTATCCCAACCCGAGGCCACAAAATGCTTCCAATGGCAAAGGAATATGAGAAAAGTGCCTGGCCCT
CCTGTCTAGCTGCATAAAGAGAGACTCCCCATCCAGTGTATCCAGGCCATTGCGGAAAACAGGGCCGATGCTGTG
ACCCCTTGATGGTGGTTTTCATATACGAGGCAGGCCTGGCCCCCTACAACTGCGACCTGTAGCGGCGGAAGTCTAC
GGGACCGAAAGACAGCCACGAACCTACTATTATGCCGTGGCTGTGGTGAAGAAGGGCGGCAGCTTTCAGCTGAAC
GAACTGCAAGGTCTGAAGTCTGCCACACAGGCCTTCGAGGACCGCTGGATGGAATGTCCCTACAGGGGACACTT
CGTCCATTCTTGAATTGGACGGGTCCACCTGAGCCCATGAGGCAGCTGTGGCCAGGTTCTTCTCAGCCAGCTGT
GTTCCCGGTGCAGATAAAGGACAGTTCCCCAACCTGTGTCCCTGTGTGCGGGGACAGGGGAAAACAAATGTGCC
TTCTCCTCCCAGGAACCGTACTTCAGCTACTCTGGTGCCTTCAAGTGTCTGAGAGACGGGGCTGGAGACGTGGCT
TTTATCAGAGAGAGCACAGTGTGAGGACCTGTCAGACGAGGCTGAAAGGGACGAGTATGAGTTACTCTGCCCCA
GACAACACTCGGAAGCCAGTGGACAAGTTCAAAGACTGCCATCTGGCCCGGTCCCTTCTCATGCCGTTGTGGCA
CGAAGTGTGAATGGCAAGGAGGATGCCATCTGGAATCTTCTCCGCCAGGCACAGGAAAAGTTTGAAAAGGACAAG
TCACCGAAATTCAGCTCTTTGGCTCCCCTAGTGGGCAGAAAGATCTGCTGTTCAAGGACTCTGCCATTGGGTTT
TCGAGGGTGGCCCCGAGGATAGATTCTGGGCTGTACCTTGGCTCCGGCTACTTCACTGCCATCCAGAACTTGAGG
AAAAGTGAGGAGGAAGTGGCTGCCCGGCGTGC CGGGTCTGTGGTGTGCGGTGGGCGAGCAGGAGCTGCGCAAG
TGTAACCAAGTGGAGTGGCTTGAGCGAAGGCAGCGTGACCTGCTCCTCGGCCTCCACCACAGAGGACTGCATCGCC
CTGGTGCTGAAAGGAGAAGCTGATGCCATGAGTTTGGATGGAGGATATGTGTACACTGCATGCAATGTGTTTG
GTGCCTGTCTGGCAGAGAACTACAAATCCCAACAAAGCAGTGACCCTGATCCTAACTGTGTGGATAGACCTGTG
GAAGGATATCTTGCTGTGGCGGTGGTTAGGAGATCAGACACTAGCCTTACCTGGAACCTCTGTGAAAGGCAAGAAG
TCCTGCCACACCGCCGTGGACAGGACTGCAGGCTGGAATATCCCCATGGGCCTGCTCTTCAACCAGACGGGCTCC
TGCAAATTTGATGAATATTTTCACTCAAAGCTGTGCCCCCTGGGTCTGACCCGAGATCTAATCTCTGTGCTCTGTGT
ATTGGCGACGAGCAGGGTGAGAATAAGTGCCTGCCCAACAGCAACGAGAGATACTACGGCTACACTGGGGCTTTC
CGGTGCCTGGCTGAGAATGCTGGAGACGTTGCATTTGTGAAAGATGTCACTGTCTTGCAGAACACTGATGGAAAT
AACAATGAGGCATGGGCTAAGGATTTGAAGCTGGCAGACTTTGCGCTGCTGTGCCTCGATGGCAAACGGAAGCCT
GTGACTGAGGCTAGAAGCTGCCATCTTGCCATGGCCCCGAATCATGCCGTGGTGTCTCGGATGGATAAGGTGGAA
CGCCTGAAACAGGTGCTGCTCCACCAACAGGCTAAATTTGGGAGAAATGGATCTGACTGCCCGGACAAGTTTTGC
TTATTCCAGTCTGAAACCAAAAACCTTCTGTTCAATGACAACACTGAGTGTCTGGCCAGACTCCATGGCAAAAACA
ACATATGAAAAATATTTGGGACCACAGTATGTGCGAGGCATTACTAATCTGAAAAAGTGTCAACCTCCCCCTC
CTGGAAGCCTGTGAATTCCTCAGGAAGTAAACCGAAGAAGATGGCCCAGCTCCCCAAGAAAGCCTCAGCCATTC
ACTGCCCCCAGCTCTTCTCCCCAGGTGTGTTGGGGCCTTGGCTCCCCCTGCTGAAGGTGGGGATTGCCCATCCATC
TGCTTACAATTCCTGCTGTGCTCTTAGCAAGAAGTAAATGAGAAATTTTGTGATATTCAAAAAAA

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FIGURE 177

MKLVFLVLLFLGALGLCLAGRRRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQAIENRAD
AVTLDGGFIYEAGLAPYKLRPVAAEVYGTERQPRTHYYAVAVVKKGGSFQLNELQGLKSCHTGLRRTAGWNVPTG
TLRPFLNWTGPPEPIEAAVARFFSASCVPGADKGQFPNLCRLCAGTGENKCAFSSQEPYFSYSGAFKCLRDGAGD
VAFIRESTVFEDLSDEAERDEYELLCPDNTRKPVDFKDCHLARVPSHAVVARSVNGKEDAIWNLLRQAQEKFGK
DKSPKFQLFGSPSGQKDLLFKDSAIGFSRVPPRIDSGLYLGSGYFTAIQNLRKSEEEVAARRARVVWCAVGEQEL
RKNQWSGLSEGSVTCSSASTTEDCIALVLKGEADAMSLDGGYVYTACKCGLVPVLAENYKSQQSSDPDPNCVDR
PVEGYLAVAVVRRSDTSLTWNSVKGKKSCHTAVDRTAGWNIPMGLLFNQTSCKFDEYFSQSCAPGSDPRS NLCA
LCIGDEQGENKCV PNSNERYYGYTGAFRCLAENAGDVAFVKDVTVLQNTDGNNNEAWAKDLKLADFALLCLDGKR
KPVTEARSCHLAMAPNHAVVSRMDKVERLKQVLLHQQAKFGRNGSDCPDKFLFQSETKNLLFNDNTECLARLHG
KTTYEKYLGPPYVAGITNLKKCSTSPLEACEFLRK

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FIGURE 178A

GCCCCGAGTGCAATCGCGGGAAGCCAGGGTTTTCCAGCTAGGACACAGCAGGTCTGTGATCCGGGTCTGGGACACTGC
CTGGCAGAGGCTGCGAGCATGAGGGGCCCTGGGGCTGGAAATTGCGCTGGACCGTCGCTTGTCTCTCGCCGCGGCG
GGGACTGCAGTGGGCGACAGATGTGAAAGAAACGAGTTCCAGTGCCAAGACGGGAAATGCATCTCCTACAAGTGG
GTCTGCGATGGCAGCGCTGAGTGCCAGGATGGCTCTGATGAGTCCCAGGAGACGTGCTTGTCTGTACCTGCAAA
TCCGGGGACTTCAGCTGTGGGGGCCGTGTCAACCGCTGCATTCCCTCAGTTCTGGAGGTGCGATGGCCAAGTGGAC
TGCGACAACGGCTCAGACGAGCAAGGCTGTCCCCCAAGACGTGCTCCCAGGACGAGTTTCGTGCCACGATGGG
AAGTGCATCTCTCGGCAGTTTCGTCTGTGACTCAGACCGGGACTGCTTGACGGCTCAGACGAGGCCTCCTGCCCG
GTGCTCACCTGTGGTCCCAGCTTCCAGTGCAACAGCTCCACCTGCATCCCCAGCTGTGGGCCTGCGACAAC
GACCCCGACTGCGAAGATGGCTCGGATGAGTGGCCGACGCGTGTAGGGGTCTTTACGTGTTCCAAGGGGACAGT
AGCCCCGTGCTCGGCCTTCGAGTTCCACTGCCTAAGTGGCGAGTGCATCCACTCCAGCTGGCGCTGTGATGGTGGC
CCCGACTGCAAGGACAAATCTGACGAGGAAAACCTGCGCTGTGGCCACCTGTGCGCCTGACGAATTCAGTGCTCT
GATGGAACTGCATCCATGGCAGCCGGCAGTGTGACCGGGAATATGACTGCAAGGACATGAGCGATGAAGTTGGC
TGCGTTAATGTGACACTCTGCGAGGGACCCAACAAGTTCAAGTGTACAGCGGCGAATGCATCACCTGGACAAA
GTCTGCAACATGGCTAGAGACTGCCGGGACTGGTCAGATGAACCCATCAAAGAGTGGCGGACCAACGAATGCTTG
GACAACAACGGCGGCTGTTCCACGTCTGCAATGACCTTAAGATCGGCTACGAGTGCCTGTGCCCCGACGGCTTC
CAGCTGGTGGCCAGCGAAGATGCGAAGATATCGATGAGTGTGAGGATCCCGACACCTGCAGCCAGCTCTGCGTG
AACCTGGAGGGTGGCTACAAGTGCCAGTGTGAGGAAGGCTTCCAGCTGGACCCCAACGAAGGCCTGCAAGGCT
GTGGGCTCCATCGCCTACCTCTTCTTACCAACCGGCACGAGGTGAGGAAGATGACGCTGGACCGGAGCGAGTAC
ACCAGCCTCATCCCCAACCTGAGGAACGTGGTCGCTCTGGACACGGAGGTGGCCAGCAATAGAATCTACTGGTCT
GACCTGTCCCAGAGAATGATCTGCAGCACCCAGCTTGACAGAGCCACGGCGTCTCTTCTATGACACCGTCATC
AGCAGGGACATCCAGGCCCCGACGGGCTGGCTGTGGACTGGATCCACAGCAACATCTACTGGACCGACTCTGTC
CTGGGCACTGTCTCTGTTGCGGATACCAAGGGCGTGAAGAGGAAAACGTTATTTCAGGGAGAACGGCTCCAAGCCA
AGGGCCATCGTGGTGGATCCTGTTTATGCTTCTGACTGGACTGACTGGGGAACCTCCCGCCAAGATCAAGAAA
GGGGGCTGAATGGTGTGGACATCTACTCGCTGGTGGTGAACATTAGTGGCCCAATGGCATCACCTTAGAT
CTCTCAGTGGCCGCTCTACTGGGTTGACTCCAAACTTCACTCCATCTCAAGCATCGATGTCAATGGGGGCAAC
CGGAAGACCATCTTGGAGGATGAAAAGAGGCTGGCCCAACCCCTTCTCCTTGGCCGTCTTTGAGGACAAAGTATTT
TGGACAGATATCATCAACGAAGCCATTTTTCAGTGCCAACCGCCTCACAGGTTCCGATGTCAACTTGTGGCTGAA
AACCTACTGTCCCAGAGGATATGGTCTCTTCCACAACCTCACCCAGCCAAGAGGAGTGAAGTGGTGTGAGAGG
ACCACCTGAGCAATGGCGGCTGCCAGTATCTGTGCTTCCCTGCCCCGAGATCAACCCCACTCGCCCAAGTTT
ACCTGCGCCTGCCCCGACGGCATGCTGCTGGCCAGGACATGAGGAGCTGCCTCACAGAGGCTGAGGCTGCAGTG
GCCACCCAGGAGACATCCACCGTCAGGCTAAAGGTGAGTCCACAGCCGTAAGGACACAGCACACAACACCCGG
CCTGTTCCCGACACCTCCCGGCTGCCTGGGGCCACCCCTGGGCTCACCACGGTGGAGATAGTGACAATGTCTCAC
CAAGCTCTGGGCGACGTTGCTGGCAGAGGAAATGAGAAGAAGCCAGTAGCGTGAGGGCTCTGTCCATTGTCTCTC
CCCATCGTGCTCCTCGTCTTCTTTCCTTGGCTGGGGGTCTTCTTCTATGGAAGAACTGGCGGCTTAAGAATCAAC
AGCATCAACTTTGACAACCCGCTCTATCAGAAGACCACAGAGGATGAGGTCCACATTTGCCACAACAGGACGGC
TACAGCTACCCCTCGAGACAGATGGTCAGTCTGGAGGATGACGTGGCGTGAACATCTGCCTGGAGTCCCGCCCCCT
GCCAGAACCCTTCTGAGACCTCGCCGGCCTTGTTTTATTCAAAGACAGAGAAGACCAAGCATTGCTGCCAG
AGCTTTGTTTTATATATTTATTCATCTGGGAGGCAGAACAGGCTTCGGACAGTGGCCATGCAATGGCTTGGGTTG
GGATTTTGGTTTCTTCTTCTTCTGTGAAGGATAAGAGAAAACAGGCCGGGGGACCAGGATGACACCTCCATTTCT
TCTCCAGGAAGTTTTGAGTTTCTCTCCACCGTGACACAATCTCAAACATGGAAGATGAAAGGGCAGGGGATGTC
AGGCCAGAGAAGCAAGTGGCTTTCAACACACAACAGCAGATGGCACCAACGGGACCCCTGGCCCTGCCTCATC
CACCAATCTCTAAGCCAAACCCCTAAACTCAGGAGTCAACGTGTTTACCTCTTCTATGCAAGCCTTGCTAGACAG
CCAGGTTAGCCTTTGCCCTGTACCCCCGAATCATGACCCACCCAGTGTCTTTCGAGGTGGGTTTGTACCTTCTT
TAAGCCAGGAAAGGGATTTCATGGCGTCGGAATGATCTGGCTGAATCCGTGGTGGCACCGAGACCAAACTCATTC
ACCAAATGATGCCACTTCCCAGAGGCAGAGCCTGAGTACCGGTACCCCTTAATATTTATTAAGTGCCTGAGACA
CCCGGTTACCTTGGCGGTGAGGACACGTGGCCTGCACCCAGGTGTGGCTGTGAGGACACCAGCCTGGTGCCCATC
CTCCCGACCCCTACCACTTCCATTCCCGTGGTCTCCTTGCACTTTCTCAGTTCAGAGTTGTACACTGTGTACAT
TTGGCATTGTGTTATTATTTTGCAGTGTCTTCTGTGCTGTGTTGGGATGGGATCCCAGGCCAGGGAAAGCCC

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FIGURE 178B

GTGTCAATGAATGCCGGGGACAGAGAGGGGCAGGTTGACCGGGACTTCAAAGCCGTGATCGTGAATATCGAGAAC
TGCCATTGTCGTCTTTATGTCCGCCCACCTAGTGCTTCCACTTCTATGCAAATGCCTCCAAGCCATTCACTTCCC
CAATCTTGTCTGTTGATGGGTATGTGTTTAAAACATGCACGGTGAGGCCGGGCGCAGTGGCCTCACGCCTGTAATC
CCAGCACTTTGGGAGGCCGAGGCGGGTGGATCATGAGGTCAGGAGATCGAGACCATCCTGGCTAACAAAGGTGAAA
CCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGCGGTGGTGGGCACCTGTAGTCCCAGCTACTCGGGAGG
CTGAGGCAGGAGAATGGTGTGAACCCGGGAAGCGGAGCTTGCACTGAGCCGAGATTGCGCCACTGCAGTCCGCAG
TCTGGCCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAAACAAAAAACCATGCATGGTGCATCAGC
AGCCCATGGCCTCTGGCCAGGCATGGCGAGGCTGAGGTGGGAGGATGGTTTGAGCTCAGGCATTTGAGGCTGTCG
TGAGCTATGATTATGCCACTGCTTTCCAGCCTGGGCAACATAGTAAGACCCCATCTCTTAAAAAATGAATTTGGC
CAGACACAGGTGCCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGCTGGATCACTTGAGTTCAGGAGTTGG
AGACCAGGCCTGAGCAACAAAGCGAGATCCCATCTCTACAAAAACCAAAAGTTAAAAATCAGCTGGGTATGGTG
GCACGTGCCTGTGATCCCAGCTACTTTGGGAGGCTGAGGCAGGAGGATCGCCTGAGCCAGGAGGTGGAGGTTGCA
GTGAGCCATGATCGAGCCACTGCACTCCAGCCTGGGCAACAGATGAAGACCCTATTTTCAGAAATACAACATAAAA
AAAAATAAATAAATCCTCCAGTCTGGATCGTTTGACGGGACTTCAGGTTCTTTCTGAAATCGCCGTGTTACTGTT
GCACTGATGTCCGGAGAGACAGTGACAGCCTCCGTCAGACTCCCGCGTGAAGATGTCACAAGGGATTGGCAATTG
TCCCCAGGGACAAAACACTGTGTCCCCCCCAGTGCAGGGAACCGTGATAAGCCTTTCTGGTTTCGGAGCACGTAA
ATGCGTCCCTGTACAGATAGTGGGGATTTTTTGTATGTTTGCACTTTGTATATTGGTTGAACTGTTATCACTT
ATATATATATATACACACATATATATAAAATCTATTTATTTTGCAAACCCTGGTTGCTGTATTTGTTCACTGAC
TATTCCTCGGGCCCTGTGTAGGGGGTTATTGCCTCTGAAATGCCTCTTCTTTATGTACAAAGATTATTTGCACGA
ACTGGACTGTGTGCAACGCTTTTTGGGAGAATGATGTCCCGTTGTATGTATGAGTGGCTTCTGGGAGATGGGTG
TCACTTTTTAAACCACTGTATAGAAGGTTTTTGTAGCCTGAATGTCTTACTGTGATCAATTAAATTTCTTAAATG

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FIGURE 179

MGPWGWLRTVALLLAAAGTAVGDR CERNEFQCQDGKCI SYKWVCDGSAECQDGSDESQETCLSVTCKSGDFSC
GGRVNR CIPQFWRC DGQVDCDNGSDEQGCP PKTCSQDEF RCHDGKCI SRQFVCDSDRDCLDGSDEASCPVLTGCP
ASFQCNSSTCIPQLWACDNDPDCEDGSDEWPQRCRGLYVFQGDSSPCSAFEFHCLSGECIHSSWRCDGGPDCKDK
SDEENCAVATCRPDEFQCS DGNCIHGSRQCDREYDCKDMSDEVGCVNVTLC EGP NKFKCHSGECITL DKVCNMAR
DCRDWSDEPIKECGTNECLDNNGGC SHVCNDLKIGYECLCPDGFQLV AQRRCEDIDECQDPDTCSQLCVNLEGGY
KCQCEEGFQLDPHTKACKAVGSIAYLFFTNRHEVRKMTLDRSEYTS LIPNLRNVVALDTEVASNRIYWS DLSQRM
ICSTQLDRAHGVSSYDTVISRDIQAPDGLAVDWIHSNIYWTD SVLGT VSVADTKGVKRKTLFRENGSKPRAIVVD
PVHGFMYWTDWGTPAKIKKGGLNGVDIYSLVTENIQWPNGITL DLLSGRLYWVDSKLHSISSIDVNGGNRKTILE
DEKRLAHPFSLAVFEDKVFWTDIINEAIFSANRLTGSDVNLLAENLLSPEDMVL FHNLTQPRGVNWCERTTLSNG
GCQYLCLPAPQINPHSPKFTCACPDGM LLARDMRSCLTEAEAAVATQETSTVRLKVSSTAVRTQHTTTTRPVPDTS
RLPGATPGLTTVEIVTMSHQALGDVAGRGNEKKPSSVRALSIVLP I VLLVFLCLGVFLLWKNWRLKNINSINF DN
PVYQKTTEDEVHICHNQDGYSPRQMVSLEDDVA

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FIGURE 180

AAGCGATGGCTGGGCCCCGCTGGATCTCCAAGGTCTCTCGGCTGCTGGGGGCATTCCACAACCCAAAAACAGGTGA
CCAGAGGTTTTACTGGTGGTGTTCAGACAGTAACTTTAATTCCAGGAGATGGTATTGGCCCAGAAATTTACAGCTG
CAGTTATGAAGATTTTTGATGCTGCCAAAGCACCTATTAGTGGGAGGAGCGGAACGTCACTGCCATTCAAGGAC
CTGGAGGAAAGTGGATGATCCCTTCAGAGGCTAAAGAGTCCATGGATAAGAACAAGATGGGCTTGAAAGGCCCTT
TGAAGACCCCAATAGCAGCCGGTCACCCATCTATGAATTTACTGCTGCGCAAAACATTTGACCTTTACGCGAATG
TCCGACCATGTGTCTCTATCGAAGGCTATAAAACCCCTTACACCGATGTAAATATTGTGACCATTGAGAGAACA
CAGAAGGAGAATACAGTGAATTGAGCATGTGATTGTTGATGGAGTCTGTCAGAGTATCAAGCTCATCACCGAGG
GGGCGAGCAAGCGCATTGCTGAGTTTGCCTTTGAGTATGCCCCGAACAACCACCGGAGCAACGTACGGCGGTGC
ACAAAGCCAACATCATGCGGATGTGAGATGGGCTTTTTCTACAAAAATGCAGGGAAGTTGCAGAAAGCTGTAAAG
ATATTAAATTTAATGAGATGTACCTTGATACAGTATGTTTGAATATGGTACAAGATCCTTCCCAATTTGATGTTT
TTGTTATGCCAAATTTGTATGGAGACATCCTTAGTGACTTGTGTGCGAGGATTGATCGGAGGTCTCGGTGTGACAC
CAAGTGGCAACATTGGAGCCAATGGGGTTGCAATTTTGTAGTGGTTCATGGGACGGCTCCAGACATTGCAGGCA
AGGACATGGCGAATCCACAGCCCTCCTGCTCAGTGCCGTGATGCTGCGCCACATGGGACTTTTTGACCATG
CTGCAAGAATTGAGGCTGCGTGTTTTGCTACAATTAAGGACGGAAAGAGCTTGACAAAAGATTTGGGAGGCAATG
CAAAATGCTCAGACTTCACAGAGGAAATCTGTGCGCCGAGTAAAGATTTAGATTAACTTCTACAACCTGGCATT
TACATCAGTCACTCTAAATGGACACCACATGAACCTCTGTTTAGAATACCTACGTATGTATGCATTGGTTTTGCTT
GTTTCTTGACAGTACATTTTTAGATCTGGCCTTTCTTAACAAAATCTGTGCAAAAGATGCAGGTGGATGTCCCT
AGGTCTGTTTTCAAGAACTTTTTCCAAGTGCTTGTTTTATTTATTAAGTGTCTACCTGGTAAATGTTTTTTTTG
TAAACTCTGAGTGGACTGTATCATTGCTATTCTAAACCATTTTACACTTAAGTTAAATAGTTTCTCTTCAGCT
GTAAATAACAGGATACAGAATTAACAAGAGAAAATGTCTAACTTTTTAAGAAAAACCTTATTTTCTTCGGTTTTT
GAAAAACATAATGGAAATAAAACAGGATATTGACATAATAGCACAAAATGACACTCTTCTAAACTAAATGGGCA
CAAGAGAATTTTCCTGGGAAAGTTCACATCAAAAAGAGTGAATGTGGTATATTTCTAAATGATATGGAAAATAGA
GACAGATTTGTCCTTTACAGAAATTACTGAGTGTGAATAAAAACCTTCAGATCCAAGAAATATATAATGAGAGATA
TAATTTTTGTAAATAAGACAAAGGTAATATATTGGATACAAAGACACAAATGTATTGTGTGTTCAATTATTTTGT
TGCTTTGAGATTTAATATTCTTTCCAAGAGCTTTAATGAAGCAGAGAGCTAGTACTTCATTTTACTGGATACA
TTTTACAGCATCATGAGTTGTACAGCCTCTGAGCCCCTGATCTGAAGCCAGAAGGGCTGAGTGTATTGTAACTT
ATTCTTGCAATGTTGCTGTCTGGGAATGGACCACACTACAGCAGGTAGTTCTGGGGGCGATACTGCCGAAAGGCCC
GAACACATGTATTTTGGCTGCAATTGAGGAACCTGGGATGCTATTAATTTTGTATTTTACAGCAACTGCCCTTCTC
CTATCCCAAAGCACCAATTACTGCCCTCTGCCTCAGCAGTACCAGTATAAGATGACATTCCAAAGACTGGAGGCA
ACTCAGCCTGAGTTAATTCACAAAATTATGCCATGCTGGGGCTTGAGCTTGAGCTTGGGCTTAGGCTTGGGCTCA
GCTTTTGACCCTCAGGCATCTCCTTTTCTTCTCTGCTTCTCCTTCTCCTCTGCTGCGCATGATTTTCTT
AATCTTCAGACACTCACTATTTTCAATGAACAGTTACCCTCTGTCCCCACAACCAAGACAACCTCATGGCCTCCTT
TGGCCCTTGTGTAAACATTGCAACCTGTGGCTTTGCAAAATGTACCCAGGTCACAAGGGGATTTTTTTTTTTTA
GCAATGATATCCCTGTCTGGGTCACTTTTTAAGCTTGTAACCGCCCCCCCAGACTTATAATCTTAAATGTATTTT
CCTTTGTTTAAAGCTGCTGCTTCTCTGTTTCATTGGATTGTGCCAGTTATCAGTGGCTCTTGGGTTCAAAGTAAT
AAA

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FIGURE 181

MAGPAWISKVSRLLGAFHNPKQVTRGFTGGVQTVTLIPGDGIGPEISAAVMKIFDAAKAPIQWEERNVTAIQGPG
GKWMIPSEAKESMDKNKMGLKGPLKTPIAAGHPSMNLLLRKTFDLNANVRPCVSIIEGYKTPYTDVNIVTIRENTE
GEYSGIEHVIVDGVVQSIKLITEGASKRIAEFAFEYARNNHRSNVTAVHKANIMRMSDGLFLQKCREVAESCKDI
KFNEMYLDTVCLNMVQDPSQFDVLVMPNLYGDILSDLCAGLIGGLGVTPSGNIGANGVAIFESVHGTAPDIAGKD
MANPTALLLSAVMMLRHMGLFDHAARIEAACFATIKDGKSLTKDLGGNAKCSDFTEEICRRVKDLD

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FIGURE 182A

CAAGTGCCGTCGCCGCGCCCCCTTCCCCCTCCCGCCTCCCGGCCCCCTCCCGGAACCGGCGGTTCGAGCTACGGT
CGCGGACGAGTGGAACCGAGACTGCCCCGCGGAGCCGCGGTATGAGCGCCCCCTCGCCACCCCGTGTCCAGGCC
CGGCCTTTCTGACAAGAGCTAGACTTCGGGCTCCTTGAGGATATTAGTTTTGTATGTTTGAATATCCTCTCACC
ATGTTTCAGCATAAAGTACCATTCCTAATGATTATCCTCAACAAGACAGGTGTGAGAGGGTTGCTGTTGCATTGCA
ATCATGGTGTCAAAAATACCAGTCCCCAGTGAGAGTGACAAATACCCCTTTGAATTAATTATGGCTGCCTATGAA
AGGAGGTTCCCTACATGTCTTTGATTCCGATGTTTCGTGGGCAGTGACACTGTGAGTGAATTCAAGAGCGAAGAT
GGGGCTATTTCATGTTCATTGAAAGGCGCTGCAAGCTGGATGTAGATGCACCCAGACTGCTGAAGAAGATTGCAGGA
GTTGATTATGTTTATTTTGTCCAGAAAACTCACTGAATTCTCGGGAACGTACTTTGCACATTGAGGCTTATAAT
GAAACGTTTTCCAATCGGGTCATCATTAATGAGCATTGCTGTACACCGTTTACCCTGAAAATGAAGATTGGACC
TGTTTTGAACAGTCTGCAAGTTTAGATATTAATCTTTCTTTGGTTTTGAAAGTACAGTGGAATAATTGCAATG
AAACAATATACCAGCAACATTAATAAAGGAAAGGAAATCATCGAATACTACCTTCGCCAATTAGAAGAAGAAGGC
ATAACCTTTGTGCCCCGTTGGAGTCCGCCCTTCCATCACGCCCTCTTCAGAGACATCTTCATCATCTCCAAGAAA
CAAGCAGCGTCCATGGCCGTCGTATCCAGAAAGCTGCCCTCAAGGAGGGGCTGAGTGGTGATGCCCTCAGCAGC
CCCAGTGACCTGAGCCCGTGGTGGGCACCCCTGACGACAACTAGATGCCGACCACATCAAGAGATACCTGGGC
GATTTGACTCCGCTGCAGGAGAGCTGCCTCATTAGACTTCGCCAGTGGCTCCAGGAGACCCACAAGGGCAAAATT
CCAAAAGATGAGCATATTCTTCGGTTCCCTCCGTGCACGGGATTTTAATATTGACAAAGCCAGAGAGATCATGTGT
CAGTCTTTGACGTGGAGAAAGCAGCATCAGGTAGACTACATTCTTGAACCTGGACCCCTCCTCAGGTCTTCAG
GATTACTACGCGGGAGGCTGGCATCATCACGACAAAGATGGCGGGCCCTCTACGTGCTCAGGCTGGGGCAGATG
GACACCAAAGGCTTGGTGAGAGCGCTCGGGGAGGAAGCCCTGCTGAGATACGTTCTCTCCGTAAATGAAGAACGG
CTAAGGCGATGCGAAGAGAATACAAAAGTCTTTGGTCGGCTATCAGCTCATGGACCTGCCTGGTGGACTTGGAA
GGGCTGAACATGCGCCACTTGTGGAGACCTGGTGTGAAAGCGCTGCTGCGGATCATCGAGGTGGTGGAGGCCAAC
TACCCTGAGACACTGGGCCGCCCTTCTCATCTGCGGGCGCCAGGGTATTTCTGTGCTCTGGACGCTGGTGTAGT
CCGTTTCATTGATGACAACACCAGAAGGAAGTTCCCTCATTATGCAGGAAATGACTACCAGGGTCTTGAGGCCCTG
CTGGATTACATCGACAAAGAGATTATTCAGATTCTCTGAGTGGGGAGTGATGTGCGAAGTGCCAGAGGGTGGGA
CTGGTCCCCAAATCTCTGTACCGGACTGCAGAGGAGCTGGAGAACGAAGACCTGAAGCTCTGGACTGAGACCATC
TACCAGTCTGCAAGCGTCTTCAAAGGAGCCCCACATGAGATTCTCATTAGATTGTGGATGCCTCGTCAGTCATC
ACTTGGGATTTTCAGCTGTGCAAAGGGGACATTGTGTTTAACTCTATCACTCCAAGAGGTGCCCCACAACCACC
AAAAAGGACTCCCTGGGAGCCACAGCATCACCTCTCCGGGTGGGAACAATGTGCAGCTCATAGACAAAGTCTGG
CAGCTGGGCCGCGACTACAGCATGGTGGAGTCGCCTCTGATCTGCAAAGAAGGAGAAAGCGTGCAGGGTTCCCAT
GTGACCAGGTGGCCGGGCTTCTACATCCTGCAGTGGAATTCACAGCATGCCTGCGTGCGCCGCCAGCAGCCTT
CCCCGGGTGGACGACGTGCTTGCGTCCCTGCAGGTCTCTTCGCACAAGTGTAAGTGATGTACTACACCGAGGTG
ATCGGCTCGGAGGATTTAGAGGTTCCATGACGAGCCTGGAGTCCAGCCACAGCGGCTTCTCCAGCTGAGTGCC
GCCACCACCTCTCCAGCCAGTCCCACTCCAGCTCCATGATCTCCAGTTAGTGCCGCGCTGCCTGCACCTAGTGT
GCAGAGGGGACGGCCGCCCTCCTCGGACAGCAGCTGCACCCGCCACCCAGCGGCGACATTGTACAGACTCCTC
TCACCTCTAGATAGCAAATAGCTCTCAGATGGTAAACGTAGTCGTTTGATCCCAAACCTACCTTGGCAGGTAGTT
TTAACTCTGATCCTAACTTAACTCAATAGCCATAGATTTTGTATACGTTGTGCACAAAATCCAACCAGAGCGCAA
GGGCTCTCTTGAAAGAAAAGTAGTTTCTGTACCAATTAAGGATTGACGTGGTCTCAGATATTGATGCAAAAAAT
TTTTCCAACGAACCTCCGATTGTCCATTAGTGAATGAATTCCTGTGACATCTCCAGAGATGGCCCCCTCTCACC
TGGGACCGGAAGCTGCCAGCTCGCTTCCCCAAGCTGCCTCATGGCCCGCACGCCGCTCACGGCCCCCATGCTTC
CCGCCAGTCAAGATGGTCTGTGGACTTAGGGCCAGCCCTTGAGGTCTTATCCTCTGAGGATTAGAGGTTGCTT
GCGGAGTACCTTGTCCCAGGGCCAGACACACCCACACCCACTGTCTGCAGTGGGGCCGGGGCTCAGGAGGG
GCTCTCAGGGACTCCTGGTGAATCCAGGAAAATGCTGCCATCGTTAAACATTACTTTCTCTTCTCTTTTCAA
ATCTTTTTGATACTTTTTAGAGCAGGATTTTTCTGTATGTGAACCTGGGTGGGGGGTCTTCCCGTTTCTTCC
GTGCGTCGCCCCCTCTACCTGCAGTCAGCTCCCAGCCAGTGTAGGCCATCTCCTCTGTGCCCTCTGGAGGCTCA
TTGTCTCAGAGCCCAGACAGTTCCAGCCACTAGGAGGCCGCTTGGAAACCAGCAAGTCGCATTTGCCACTTGACA
CTGTCCATGGGGTTTTATTAGTAGCTAAGCAGCAGCTCTCGCATCCACTTCAGGGTGGCGTGTGGCATGTAGGAG
TCCTGCTTCTTTGTACATGGGAATTGTGGACTCATGCGTGTGTGTGTGTGCATGTGCTGTGTGTGTGCATGTGTG
CATGACGGTGGGGGTGCTGGGGGGACGGGGTGAGTGGAACCTTAGTTTGTAGTAATGAAGGAATCTTCACAGAAGC

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FIGURE 182B

AAATCAGAATATGGGATTTGTTTGCCTTTTACATTTTGTTTAATTCCTGATTTTAAAGCCTGCTCTATCTGGTAC
AGGCCCTTATTTTTTCAGCTTTTTATGGGAAAAGCAGGTTATTTGAGAATCTGTCCAGAAGTTGCATAGGGGATG
GCCTCCACGATAAGGACATGCAACACGTGTTTCTGTGTGCAGCAGAGGCCGTGTTTTTCATGCCAAACCCACGC
GGCTGTCAACTGTGTGCGTGGTAGGCATGGAGATCCTGGTTGTGCCGTCTCAGCTCCGCTCTGAAGGCACTGTGT
GGGTGCTGCGTGACTGGAGAGCTGTGTGGAGGCCATGTGTGCCCCGTGCAGGGATCAGGAGGGCGGGGAGGGAC
CGAGCAGCCCTCTTGCCCGGTCGGGTACGCCCTAGTGGCTGCCTGCACACTGTAGACGTCCCAGGGCCTGTGCTG
TGATCACCTGCCTTTGGACCACATTTGTGTTTGCTCTTAGAGATCGAGCTCCTCAGTGGTACCTGAAGCCTTTGC
TTCCGGAAGCGCGGTAGGGTTTCGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTA
GTAGGTAGGGTTAGTAGGTAGGGTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGG
TTCGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGT
GGGTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGTTTCGTAGGTAGGGCTAGTAG
GTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGTTTCGTAGGTAGGGCTGG
TAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGC
TAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGTTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAG
GGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGG
TAGGGCTAGTAGGTAGGGTTTCGTAGGTAGGGTTTCGTAGGTAGGGTTTCGTAGGTAGGGTTAGTAGCGCGTCTGTGC
TGCTTCCACCTGGTGCTTCCTGTTCCCAAATCACAAAGGGCCTGAAGGTGGTCCCTGCTTTCTCTTTCTCTTTCTC
TGTGTCTCAGATGGCGATTTTGCTGACAGCTGCCAAGAAAATGCTTCACTCAACAGTCCTCATGTGCCCAGAGAT
GTTTATAGAACTGTTTGAATTGCAGCCATCCCCTGCCCCCTCCCAGGCTGAAGATCTGTTCTTTTTAAGTTGATT
CGGGAGTGGCATTCTTTTATACCCAAAGACTGTAGTGCATCTTGAAGAGCTCAAAGCACATGACCGCACAAATGC
TTACAGGGTTTCTCCCGAGTAATCCAATCTCACTCCCCTTGTAAGGGAATTCTGGGGCAGCTATGGTTTGAGTA
TGCAGTTTGCATCGTGTTTCTACCTTTAGTACCTTGCCACTCTTTTAAAACGCTGCTGTCATTTCCCATTTCTTA
GTACTAATGATTCTTTGATTCTCCCTCTATTATGTCTTAATTCACCTTTCCCTTAAATTTGTTATTTGCATATC
AAATTCTGTAAATGTTTTGTAAACATATTACCTCACTTGGTAATACAATACTGATAGTCTTTAAAAGATTTTTTT
ATTGTTATCAATAATAAATGTGAACATTTTAAAG

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FIGURE 183

MVQKYQSPVRVYKYPFELIMAAAYERRFPTCPLIPMFVGS DTVSEFKSEDGAIHVIERRCKLDVDAPRLKKIAGV
DYVYFVQKNSLNSRERTLHIEAYNETFSNRVINEHCCTVHPENEDWTCFEQSASLDIKSFFGFESTVEKIAMK
QYTSNIKKGKEIEEYLRQLEEEGITFVPRWSPPSITPSSETSSSSSKKQAASMAVVIPEAALKEGLSGDALSSP
SAPEPVVGTPDDKLDADHIKRYLGDLTPLQESCLIRLRQWLQETHKGKIPKDEHILRFLRARDFNIDKAREIMCQ
SLTWRKQHQVDYILETWTPPQVLQDYYAGGWHHHDKDGRPLYVLRLGQMDTKGLVRALGEEALLRYVLSVNEERL
RRCEENTKVFGRPISWTCLVDLEGLNMRHLWRPGVKALLRIIEVVEANYPETLGRLILRAPRVFPVLWTLVSP
FIDDNTRRKFLIYAGNDYQGPGGLLDYIDKEIIPDFLSGECMCEVPEGGLVPKSLYRTAEELNEDLKLWTETIY
QSASVFKGAPHEILIQIVDASSVITWDFDVCKGDIVFNIYHSKRSPQPPKKDSLGAHSITSPGGNNVQLIDKVVQ
LGRDYSMVESPLICKEGESVQGSHVTRWPGFYILQWKFHSMPCAASSLPRVDDVLASLQVSSHCKCKVMYYTEVI
GSEDFRGSMTSLESSHSGFSQLSAATTSSSQSHSSSMISR

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FIGURE 184

AATTCCGCGGAATCATCGGAATCCTTCACCATGGCATCCAGCCCGGCCAGCGTCGGCGAGGCAATGATCCTCTC
ACCTCCAGCCCTGGCCGAAGCTCCCGGGCTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCCACCATT
GAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCCTGGAGGAAGAAGAGGATGGAGAGGAGCTCATTGGA
GATGGCATGGAAAGGGACTACCGCGCCATCCAGAGCTGGACGCCATGAGGCCGAGGGACTGGCTCTGGATGAT
GAGGACGTAGAGGAGCTGACGGCCAGTCGAAGGGAGGCAGCAGACGGGCCATGCGGCACGGTGACCGGGAGCTGG
CCGGGGCTGGGCGCATGCGCCGTGGGCTCCTGTATGACAGCGATGAGGAGGACGAGGAGCGCCCTGCCCGCAAGC
GCCGCCAGTGGAGCCGGCACGGAGGACGGCGAGGAGGACGAGCAGATGATTGAGAGCATCGAGAACCCTGGAGGAT
CTCAAAGGCCACTCTGTGCGCGAGTGGGTGAGCATGGCGGGCCCCCGGCTGGAGATCCACCACCGCTTCAAGAAC
TTCTGCGCACTCACGTGACAGCCACGGCCACAACGTCTTCAAGGAGCGCATCAGCGACATGTGCAAAGAGAAC
CGTGAGAGCCTGGTGGTGAAGTATGAGGACTTGGCAGCCAGGGAGCACGTGCTGGCCTACTTCTGCGCTGAGGCA
CCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTGGTACTGGCCATGTACCCCAAGTACGACCGC
ATCACCAACCACATCCATGTCCGCATCTCCACCTGCCTCTGGTGGAGGAGCTGCGCTCGCTGAGGCAGCTGCAT
CTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACTGGCGTCTGCCCCAGCTCAGCATGGTCAAG
TACAAGTGAACAAGTGAATTTCTGCTCTGGGTCTTTCTGCCAGTCCCAGAACCCAGGAGGTGAACCAGGCTCC
TGCTCTGAGTGGCAGTCGGCCGGGCCCTTTGAGGTCAACATGGAGGAGACCATCTATCAGAACTACCAGCGTATC
CGAATCCAGGAGAGTCCAGGCAAAGTGGCGGCTCGGCGGCTGCCCCGCTCCAAGGACGCCATTCTCCTCGCAGAT
CTGGTGGACAGCTGCAACGCAGGAGACGAGATAGAGCTGACTGGCATCTATCACAACAATATGATGGCTCCCTC
AACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCTATCCTAGCCAACCACGTGGCCAAGAAGGACAACAAGTT
GCTGTAGGGGAAGTGAACGATGAAGATGTGAAGATGATCACTAGCCTCTCCAAGGATCAGCAGATCGGAGAGAAG
ATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATCAAGAGAGGCCCTGCTCTGGCCCTGTTCCGA
GGGAGCCCCAAAAACCCAGGTGGCAAGCACAAGGTACGTGGTGATATCAACGTGCTCTTGTGCGGAGACCCTGGC
ACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAGTGTCCAGCCGAGCCATCTTCACCACTGGCCAGGGGGCG
TCGGCTGTGGCCGTACGGCGTATGTCCAGCGGCACCCTGTGAGCAGGGAGTGGACCTTGGAGGCTGGGGCCCTG
GTTCTGGCTGACCGAGGAGTGTGTCTCATTGATGAATTTGACAAGATGAATGACCAGGACAGAACCAGCATCCAT
GAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATCGTCACTCCCTGCAGGCTCGCTGCACGGTC
ATTGCTGCCGCCAACCCCATAGGAGGGCGCTACGACCCCTCGCTGACTTTCTCTGAGAACGTGGACCTCACAGAG
CCCATCATCTCACGCTTTGACATCCTGTGTGTGGTGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCC
CGCTTCGTGGTGGGSCAGCCAGTCAGACACCACCCAGCAACAAGGAGGAGGAGGGGCTGGCCAATGGCAGCGCT
GCTGAGCCCGCCATGCCCAACACGTATGGCGTGGAGCCCCCTGCCCCAGGAGGTCTGAAGAAGTACATCATCTAC
GCCAAGGAGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGACAAGGTGGCCAAGATGTACAGTGACCTGAGG
AAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCACATCGAGTCCATGAGTCATGGCGGAGGCCCA
CGCGCGCATCCATCTGCGGGACTATGTGATCGAAGACGACGTCAACATGGCCATCCGCGTGATGCTGGAGAGCTT
CATAGACACACAGAAAGTTCAGCGTCATCGCAGCATGCGCAAGACTTTTGCCCGCTACCTTTTATTCCGGCGTGAC
AACAATGAGCTGTTGCTCTTCATACTGAAGCAGTTAGTGGCAGAGCAGGTGACATATCAGCGCAACCGCTTTGGG
GCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTGGATAAGGCTCGTCAGATCAACATCCACAACCTC
TCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTCAGCCACGACCTGAAAAGGAAAATGATCCTGCAG
CAGTTCTGAGGCCCTATGCCATCCATAAGGATTCTTTGGGATTCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTT
TATGGACACAAAAACAGAGCACTTGATGAAGTCTGGGGTACTAGGGTCAGGGCTTATAGCAGSATGTCTGGCTGCA
CCTGGCATGACTGTTTGTCTTCCAAAGCCTGCTTTGTGCTTCTCACCTTTGGGTGGGATGCCTTGCCAGTGTGTC
TTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGTCTCCACTCAGTACCTTGGATCAGAGCTGCTGAG
TTCAGGATGCCTGCGTGTGGTTTAGGTGTTAGCCTTCTTACATGGATGTCAGGAGAGCTGCTGCCCTCTTGGCGT
GAGTTGCGTATTACAGGCTGCTTTTGTCTGCTTTGGCCAGAGAGCTGGTTGAAGATGTTTGTAAATCGTTTTCAGTC
TCCTGCAGGTTTCTGTGCCCTGTGGTGGAAAGAGGCACGACAGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGC
AGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACAGTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCC
CACTCTCTTATTGTGCATTCCGTTTGGTTTCTGTAGTTTTAATTTTAAATAAAGTTGAATAAAATATAAAAAA
AAAA

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FIGURE 185

MASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGDGMERDYRAI
PELDAYEAEGALDDEDVEELTASRREAADGPCGTVTGSWPGLGACAVGSCMTAMRRTRSALPASAASGAGTEDG
EEDEQMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKENRESLVVNYED
LAAREHVLAYFLPEAPAEELLQIFDEAALEVVLAMYPKYDRITNHIHVRI SHLPLVEELRSLRQLHLNQLIRTSGV
VTSTGVLPQLSMVKYCNKCNFVLGPFQSQSQNEVKPGSCPECQSAGPFVNMEETIYQNYQRIRIQESPGKVA
ARRLPKSKDAILLADLVDSCNAGDEIELTGIYHNNYDGS LNTANGFPVFATVILANHVAKKDNKVAVGELTDEDV
KMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGPALALFGGEPKNPGGKHKVRGDINVLLCGDPGTAKSQFLKYI
EKVSSRAIFTTGQASAVAVTAYVQRHPVSREWLEAGALVLADRGVCLIDEFDKMNDQDRTSIEAMEQQSISI
SKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTPVQDEMLARFVVGSHVRH
HPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEV LKKYIIYAKERVHPKLNQMDQDKVAKMYSDLRKESMATGSIP
ITVRHIESMSHGGGPRAHPSAGLCDRRRRQHGHPRDAGELHRHTEVQRHRSMRKT FARYLSFRDNNELLFILK
QLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNL SAFYDSELF RMNKF SHDLKRKMILOQF

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FIGURE 186A

TGAATTCGTGAGAGACTTGAGGGAGGCGCTGCGACTGACAAGCGGCTCTGCCCGGGACCTTCTCGCTTTCATCTA
GCGCTGCACTCAATGGAGGGGCGGGCACCGCAGTGCTTAATGCTGTCTTAACTAGTGTAGGAAAACGGCTCAACC
CACCGCTGCCGAAATGAAGTATAAGAATCTTATGGCAAGGGCCTTATATGACAATGTCCCAGAGTGTGCCGAGGA
ACTGGCCTTTCGCAAGGGAGACATCCTGACCGTCATAGAGCAGAACACAGGGGGACTGGAAGGATGGTGGCTGTG
CTCGTTACACGGTCGGCAAGGCATTGTCCCAGGCAACCGGGTGAAGCTTCTGATTGGTCCCATGCAGGAGACTGC
CTCCAGTCACGAGCAGCCTGCCTCTGGACTGATGCAGCAGACCTTTGGCCAACAGAAGCTCTATCAAGTGCCAAA
CCCACAGGCTGCTCCCCGAGACACCATCTACCAAGTGCCACCTTCCTACCAAATCAGGGAATTTACCAAGTCCC
CACTGGCCACGGCACCCAAGAACAAGAGGTATATCAGGTGCCACCATCAGTGCAGAGAAGCATTGGGGGAACCGAG
TGGGCCCCACGTGGGTAAAAAGGTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAG
ATACCAAAGGATGTCTATGATATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGC
AAAAGGCCCTGTGTTTTTCAAGTTCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGG
GGTATATGCCATTCCGCCCTCTGCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCTCC
CATGAGACAAGCTGGAAGGCCGGACCTCAGACCGGAGGGGTTTATGACATTCTCCAACCTGCACCAAGCCAGC
AGGGAAGGACCTTCATGTAAATACAACCTGTGACATTCCAGGAGCTGCAGAACCGGTGGCTCGAAGGCACCGAG
CCTGTCCCCGAATCACCCACCCCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCCG
AGGCGTTCAGTTTCTTGAGCCACCAGCAGAAACAGTGAGAAAGCAAACCCCGAGAAAGGGATGGTGTATTATGA
TGTCCCTCTGCATAACCCGCCAGATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTC
CAGTACAGGCAGCACCCGGAGTAACATGTCCACGTCTTCCACCTCTCCAAGGAGTCTCACTGTGACGCTCCCC
AGCTCAGGACAAAAGGCTCTTCTTGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGA
GATGGGTGTCTCCAGCCTAATGGCACTGGTCACTACCGACTGGCGGTGTACGGATATATGGAAAGACACATCAA
TGAAATACGCACAGCAGTGGACAAGGTGGAGCTGTTCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGC
AAATGCTGCCTGCCTCCCGGAACCTCATCCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTGAAGACTCCCA
CCAGATCCTGAGTCAAACCAGCCATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCC
CCAGAACAAGTGTGACGATCTGGACCGGTTTGTGATGGTGGCAAAGACGGTGCCCGATGACGCCAAGCAGCTCAC
CACAACCATCAACACCAACGCAGAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGA
GAGCATCATGAACCAACGGAGTACCCACACGGTGGCTCCAGGGACAGCTGCTGCATCCTGGTGACCACAAGGC
CCAGGCCCAACAAGGCACTGCCCCAGGCCTGAGCAAGGAGCAGGCCCTGACTGTAGCAGCAGTGATGGTTC
TGAGAGGAGCTGGATGGATGACTACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGA
GCTATTGGAAAAAGAGAATATCATGAACAGAAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCT
GTTGGAACAAGAGATTACAAAGCCCGTGGAGAATGACATCTCGAAGTGGAAGCCCTCTCAGAGCCTACCCACCAC
AAACAGTGGCGTGAGTGCTCAGGATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTTCATTTT
CCTTCTCAACGCCATTGACGCCTCTTCAGTTGTGTGCTCAGCTCAGCCAGCCCCCGCAATCTTCGTGGCACACAG
CAAGTTTGTATCCTCAGTGCACACAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCAGGA
CATTTCGCAACAAAGTCATGAACCTCAGCAACCAGCTCTGCGAGCAGCTCAAGACTATAGTCATGGCAACCAAGAT
GGCCGCCCTCCATTACCCAGCACCACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGC
CCAGCTGTTCAAGCGCTCTTTGCTGGAGATGGCAACGTTCTGAGAAGAAAAAAGAGGAAGGGGACTGCGTTAA
CGGTTACTAAGGAAAACTGGAAATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATAATTTTATATAA
AAATGAAATATTTTAACATTTTATGGGTACAGCAACTTTAGAAATTCAGGGAGCTGGAGAGGGAAATCTTTTTT
TCCCCCTGAGTGTTCTTATGTATACAGAAAGTATCTGAGACATAAACTGTACAGAAAATTTGTCCACGTCCTT
TTGTATGCCCATGTATTCATGTTTTTGTGTGTAGATGTTTGTCTGATGCATTTTCAATAAAAAACCATGAAT
TACGAAGCACCTTAGTAAGCACCTTCTAATGCTGCATTTTTTTTGTGTTGTTTAAAAACATCCAGCTGGTTATAA
TATTGTTCTCCACGTCCTTGTGATGATTCTGAGCCTGGCACTGGGAATCTGGGAAGCATAGTTTATTTGCAAGTG
TTCACCTTCAAATCATGAGGCATAGCATGACTTATTTCTGTTTTGAAAACCTTTTCAAACCTGACCATCTTAA
ACACATGATGGCCAAGTGCCACAAAGCCCTCTTGCGGAGACATTTACGAATATATATGTGGATCCAAGTCTCGAT
AGTTAGGCGTTGGAGGGAAGAGAGACCAGAGAGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATA
CTGAGAGACAGCTACAATAAAAGGAGAGCAATTGCCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTT
CAGTCATGAGGTTTTTCCAAAAGATGTTTTTAGAGTTGTAAAACCATATTTGCAGCAAAGATTTACAAAGGCGTA
TCAGACTATGATTGTTTACCAAAAATAGGGGAATGGTTTGATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTT

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FIGURE 186B

AATATTCACTTTGGTGCTACTACCCCCATTACCTGAGGAACTGGCCAGGTCCTTGATCATGGAACTATAGAGCTA
CCAGACATATCCTGCTCTCTAAGGGAATTTATTGCTATCTTGACCTTCTTTAAAACTCAAAAAACATATGCAGA
CCTGACACTCAAGAGTGGCTAGCTACACAGAGTCCATCTAATTTTGGCAACTTCCCCCCCCGAATTC

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FIGURE 187

MKYKNLMARALYDNVPECAEELAFRKGDILTVIEQNTGGLEGWWLCSLHGRQGIVPGNRVKLLIGPMQETASSHE
QPASGLMQQTFGQQKLYQVPNPQAAPRDTIYQVPPSYQNQGIYQVPTGHGTQEQEVYQVPPSVQRSIGGTSGPHV
GKKVITPVRTGHGYVYEYPSRYQKDVYDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAI
PPSACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKNCDIPGAAEPVARRHQSLSPN
HPPPQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLDGINRLSFSSTGS
TRSNMSTSSSTSSKESSLASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRT
AVDKVELFLKEYLHFVKGAVANAACLP ELILHNKMKRELQRVEDSHQILSQTS HDLNECSWSL NILAINKPQNK
DDLDRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHN
KALPPGLSKEQAPDCSSSDGSEERSWMDYDYVHLQGKEEFERQQKELLEKENIMKQNMQLHHQLSQFQLEQE
ITKPVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVI
LSAHLVFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFK
RSLLEMATF

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FIGURE 188

CGCAGGGACCGTGCTCCGCCGTCTCCGCCGCATCTTCCACCCTCGCCGCCGCCGAGCTCCCCGCGCTCGTGCCA
CCGCCGCCCGCTCCACCCTCAGCGCCACCGCCATGCGGGAGATCGTGACCTGCAGGCCGCCAGTGCGGCAACC
AGATCGGGGCCAAGTTTTGGGAGGTTATCAGTGACGAACATGGCATCGACCCACAGGCACATACCATGGGGACA
GTGACCTGCAACTGGAGAGGATCAACGTGTACTACAACGAGGCCACAGGAGGAAATTATGTCCCCAGAGCGGTGC
TGGTGGACCTGGAACCCGGCACCATGGACTCTGTCCGTTCTGGCCCTTCGGTCAGATCTTTCGGCCGGACAACT
TCGTGTTTGGCCAATCCGGAGCCGGCAACAACCTGGGCAAAGGGGCACTACACGGAGGGCGCAGAGCTGGTGGACG
CTGTCTGGACGTAGTCCGGAAGGAGGCCGAGAGCTGCGACTGCCTTCAGGGCTTCAGCTGACCCACTCGCTGG
GGGTGGCACGGGGTCCGGAATGGGCACGCTGCTCATCAGTAAGATCCGCGAGGAGTCCCAGACCGCATCATGA
ACACCTTCAGCGTGGTGCCCTCGCCCAAAGTGTCAGACACGGTGGTGGAGCCCTACAACGCCACGCTGTCTGTGC
ACCAGCTGGTGGAGAATACGGATGAGACCTACTGCATCGACAACGAGGCACTCTACGACATCTGTTTCCGCAACC
TCAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTGTGCGCCACCATGAGCGGGGTACCACCTGCC
TGCGCTTCCCGGGCCAGCTGAACGCCGACCTGCGCAAGCTGGCCGTCAACATGGTTCCCTTTCCTCGCCTGCACT
TCTTCATGCCCCGCTTCGCACCCCTGACCAGCCGGGGCAGCCAGCAGTACCGGGCCCTGACGGTGCCCCGAGCTCA
CCCAGCAGATGTTTCGATGCCAAGAACATGATGGCGGCGTGCGACCCGCGCCACGGCCGCTACCTGACCGTGGCCG
CCGTGTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGAGCGTGCAGAGCAAGAACAGCAGCT
ACTTCGTGGAGTGGATCCCCAACACGTGAAGACGGCCGTGTGCGACATCCCGCCCCGCGGCCTGAAGATGGCCG
CGACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCC
GGCGCAAGGCCTTCTTGCACTGGTACACGGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACA
TGAATGACCTGGTATCTGAGTACCAGCAGTACCAGGACGCCACGGCCGAGGAGGGCGAGTTCAGGAGGAGGCGG
AGGAGGAGGTGGCCTAGGCTGCTCCCATCGCTTCCCACCTGTCCCCTCGAGGCTTCTGACCTTTGATCCGCTAGG
CCCCCATCTCTGAACCCCTAGAGCCCCGCTTTCCCTCCAAGGCTGACTCCCCGCTGACCCTAACAATACCTTTGG
AGCTCGCTTTACCTCTGGCTACTTCATCTCCGACCCTGGCTCCCCCTTTGAGCCCTAATTTATCTTTAACCCCTT
GAGCTCTTCCAACCTTGACATTCCCAGGAGGAGCCCCGCTTCAACCCCTTCTGACTCTGGAAACCGCACCTTTAAC
TTTGACAGACCTTCCTTCACCCCTGACTTCTGCTTACCTTTGACCTCTGCCCCCATGAATCCCATTTTACCTCT
AGACCTATAAGTTCTGGTTTATGTTTGACCCCTCCCTCTGAGCTGCACTTCACCGCTGACCTGCCTCACCTTTA
ACCCCCACCTGAGCCCCAGCTCCTACCTCTGACCCCAACTTCTCTTTGATCTCTGAATCCCCTCTGACTCCAAC
TTCTCTTTCACCTCTATGAGTCCCATTTTACTTCTACACCTGCAAGTCCTGGTTTATATTGGACCCCTCCCTCC
GAGCTGCAGTTCACCTTTGACCTTGCTCACCTTTCACCCCCACCCCCACAGCGTCAGCTCCTACCTCTGACC
CCAGCTTCTCTCTGATTCCCACAGGCCCATGCATCTCCCTGCCTCACTCCCCTCAGCCCTGCCGACCTTAGC
TTATCTGGGAGAGAAACAAGGCCTGGTGCCTGTGAGGAAGAGAGGTCACCCCTACCCTCCCTCCCCGCTTCCCTG
CCTCACCTCAATAAATAAATTAATTGTTGTTCATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 189

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGSDQLQLERINVYYNEATGGNYVPRAVLVDLEPGTMS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDAVL DVVRKEAESCDCLQGFQLTHSLGGGTGSGMGT
LISKIREEFDPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVA AVFRGRMSMKEVDEQMLSVQSKNSSYFVEWIPNNVKTAVCDIPPRGLKMAATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEGEFEEEEEEVA

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FIGURE 190

GGCACGAGGGAGAACTAGTCTCGATTTTTTTTTTTTTTTTTTTCTTTGTTTTGTTTTCTGTATAAAAAAGGAC
CCCAAATATAAAGGTAGGGAAAGGGACAAGAGGGAACATACCCCTTAGTGTAGAGAAATGGGAAGGAGAAGGAGA
AGCCTCAAAAGGAGAGGTGGGAGGGGAATGTCATTAAGGCAGCAAAGTAATCTCTGTAGAAAGATGGAGGAGGAC
CCTCCATAGCCTCAGAGATAAAGGCAAAGATTGCCCTCTCAGTGTCCAGAAGGGAAATGGCAGCTTTTCTTCCTT
CCATGGCAGCCACTCCATTGCTCACTCCGGATTACCTTCATCCTTATGTAGATAAGAGTGTGTCAGAGCTCGAAA
GGCAGAGATTGCTTGTGTGGGTAAAGTCAGCATTTCAGCAGCAGCTGTGCTCCCGACTCCTCCATCTCAGG
TACCACCGACTGCACTGGGCGGGGCCCTCTGGGGGGAAAGGCTCCACGGGGCAGGGATACATCTCGAGGCCAGTC
ATCCTCTGGAGGCAGCCCAATCAGGTCAAAGATTTGCCCAACTGGTCGGCTTCAGAGTTTCCACAGAAGAGAGG
CTTTCGACGAAACATCTCTGCAAAGATACAGCCAACACTCCACATGTCCACAGGTGTTGCATATGTGGACTGCAG
AAGAACTTCGGGAGCTCGGTACCAGAGTGTAACAACCACGGGTGTAAGTGCCATCTGGTAGCTGTAGATTCTGGC
CAGGCCAAAGTCAGCCAGCTTGACTGTTCCACCACTTGTCAACAGAAATGTTCTCTGGCTTCAGATCTCGGTGAAC
GATGCAATTGGCATGAAGGAAATCTAGGCCTCTTAGAAACTGGCGCATCAGATCCTTGATCGTTTTGGCTGGCAA
GCCTGGTGGGGTGCCTTGTCCAGATATGTCTTAGGTCTGGTCTACATGCTCAAACACCAGGGTTACCTTGAT
CTCCCGGTCAGTTCGGGATGTGGCACAGACGTCCATCAGCCGGACAACATTGGGATGCTCAAAGCCTCCAGTCG
CCTCAGTAAAGCCACCTCACGAAGTGTGCTGATGGGAAGGCCTCCTCCACCTCCTCCTCATTGGGGACTCTCAC
ACTCTTGAGGGCCACAAAGTGGCCACTGTGGGGATCACGGGCCTTGTACACTGTCCCATAGGCACCGACACCAAT
TTCAGCCACTGGCTCATATCGAGAGGTAGCCATTCTCAGATCAAGGGAGACCCTCACGCCAGCCCGGGGTGCTGT
GGGGGCGGCCCGTTATCGGGCCCCGGAGCCGTTTCTACGGCCCCATACACCCGAGCTCGGTCCGGAGCAG

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FIGURE 191

MSTGVAYVDCRRTSGARYQSVTTTGVSAIW

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FIGURE 192

AGCTGAGGTGTGAGCAGCTGCCGAAGTCAGTTCTTGTGGAGCCGGAGCTGGGCGCGGATTGCGCCGAGGCACCGA
GGCACTCAGAGGAGGTGAGAGAGCGGCGGCAGACAACAGGGGACCCCGGGCCGCGGCCAGAGCCGAGCCAAGC
GTGCCCCGCGTGTGTCCCTGCGTGTCCGCGAGGATGCGTGTTGCGGGGTGTGTGCTGCGTTACAGGTGTTTCTGC
GGCAGGCGCCATGTCAGAACCGGCTGGGGATGTCCGTGAGAACCCATGCGGCAGCAAGGCCTGCCGCGCCTCTT
CGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGA
GCGATGGAACCTTCGACTTTGTACCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGG
CCTGCCCAAGCTCTACCTTCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCAC
CTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCG
CTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACGGCGGCAGACCAGCAT
GACAGATTTCTACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCCTTAATCCGCCCACAGGAAGCCTGC
AGTCTTGAAGCGCGAGGGCCTCAAAGGCCCGCTCTACATCTTCTGCCCTTAGTCTCAGTTTGTGTGTCTTAATTA
TTATTTGTGTTTTAATTTAAACACCTCCTCATGTACATAACCTGGCCGCCCCCTGCCCCCAGCCTCTGGCATTGA
GAATTATTTAAACAAAAACTAGGCGGTTGAATGAGAGGTTCTTAAGAGTGCTGGGCATTTTTATTTTATGAAATA
CTATTTAAAGCCTCCTCATCCCGTGTCTCCTTTTCTCTCTCCCGGAGGTTGGGTGGGCGGGCTTCATGCCAGC
TACTTCTCTCTCCCCACTTGTCCGCTGGGTGGTACCCTCTGGAGGGGTGTGGCTCCTTCCCATCGCTGTACAGG
CGGTTATGAAATTCACCCCCCTTCTGGACACTCAGACCTGAATTCTTTTTCATTTGAGAAGTAAACAGATGGCA
CTTTGAAGGGGCCCTCACCGAGTGGGGGCATCATCAAAAACCTTTGGAGTCCCCTCACCTCCTCTAAGGTTGGGCAG
GGTGACCTGAAGTGAGCACAGCCTAGGGCTGAGCTGGGGACCTGGTACCCTCCTGGCTCTTGATACCCCCTCT
GTCTTGTGAAGGCAGGGGGAAGGTGGGGTCTGGAGCAGACCACCCGCTGCCCTCATGGCCCTCTGACCTGC
ACTGGGGAGCCCGTCTCAGTGTTGAGCCTTTTCCCTCTTTGGCTCCCCCTGTACCTTTTGAGGAGCCCCAGCTACC
CTTCTTCTCCAGCTGGGCTCTGCAATTCCCCTCTGCTGCTGTCCCTCCCCCTTGTCTTTCCCTTCAGTACCCTC
TCAGCTCCAGGTGGCTCTGAGGTGCCTGTCCCACCCCCACCCCCAGCTCAATGGACTGGAAGGGGAAGGGACACA
CAAGAAGAAGGGCACCCCTAGTTCTACCTCAGGCAGCTCAAGCAGCGACCGCCCCCTCCTCTAGCTGTGGGGTGA
GGGTCCCATGTGGTGGCACAGGCCCCCTTGAGTGGGGTTATCTCTGTGTTAGGGGTATATGATGGGGGAGTAGAT
CTTTCTAGGAGGGAGACACTGGCCCCCTCAAATCGTCCAGCGACCTTCTCATCCACCCCATCCCTCCCCAGTTCA
TTGCACTTTGATTAGCAGCGGAACAAGGAGTCAGACATTTTAAGATGGTGGCAGTAGAGGCTATGGACAGGGCAT
GCCACGTGGGCTCATATGGGGCTGGGAGTAGTTGTCTTTCTGGCACTAACGTTGAGCCCCTGGAGGCACTGAAG
TGCTTAGTGTACTTGGAGTATTGGGGTCTGACCCCAAACACCTTCCAGCTCCTGTAACTACTGGCCTGGACTGT
TTTCTCTCGGCTCCCCATGTGTCTTGGTTCCCGTTTCTCCACCTAGACTGTAAACCTCTCGAGGGCAGGGACCAC
ACCCTGTACTGTTCTGTGTCTTTCACAGCTCCTCCACAATGCTGAATATACAGCAGGTGCTCAATAAATGATTCT
TTAGTGACTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 193

MSEPAGDVQRNPGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDFVTETPLEGDFAWERVRLGLPK
LYLPTGPRRGRDELGGGRRPGTSPALLQGTAEEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDF
YHSKRRLIFSKRKP

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FIGURE 194

GTGGAACCTCGATATTGGTGGTGTCCATCGTGGGCAGCGGACTAATAAAGGCC**AT**GGCGCCAGCAGAAATCCTGA
ACGGGAAGGAGATCTCCGCGCAAATAAGGGCGAGACTGAAAAATCAAGTCACTCAGTTGAAGGAGCAAGTACCTG
GTTTCACACCACGCCTGGCAATATTACAGGTTGGCAACAGAGATGATTCCAATCTTTATATAAATGTGAAGCTGA
AGGCTGCTGAAGAGATTGGGATCAAAGCCACTCACATTAAGTTACCAAGAACAACCACAGAATCTGAGGTGATGA
AGTACATTACATCTTTGAATGAAGACTCTACTGTACATGGGTTCTTAGTGCAGCTACCTTTAGATTGAGAGAATT
CCATTAACTGAAGAAGTGATCAATGCTATTGCACCCGAGAAGGATGTGGATGGATTGACTAGCATCAATGCTG
GGAGACTTGCTAGAGGTGACCTCAATGACTGTTTCATTCTTGTACGCCTAAGGGATGCTTGGAACCTCATCAAAG
AGACAGGGGTGCCGATTGCCGGAAGGCATGCTGTGGTGGTGGGCGCAGTAAAATAGTTGGGGCCCCGATGCATG
ACTTGCTTCTGTGGAACAATGCCACAGTGACCACCTGCCACTCCAAGACTGCCCATCTGGATGAGGAGGTAAATA
AAGGTGACATCCTGGTGGTTGCAACTGGTCAGCCTGAAATGGTTAAAGGGGAGTGGATCAAACCTGGGGCAATAG
TCATCGACTGTGGAATCAATTATGTCCCAGATGATAAAAAACCAAATGGGAGAAAAGTTGTGGGTGATGTGGCAT
ACGACGAGGCCAAAGAGAGGGCGAGCTTCATCACTCCTGTTCTTGCGCGCTAGGGCCCATGACAGTTGCAATGC
TCATGCAGAGCACAGTAGAGAGTGCCAAGCGTTTCTTGAGAAAATTAAGCCAGGAAAGTGGATGATTGAGTATA
ACAACCTTAACCTCAAGACACCTGTTCCAAGTGACATTGATATATCACGATCTTGTAACCGAAGCCCATTTGGTA
AGCTGGCTCGAGAAATTGGTCTGCTGTCTGAAGAGGTAGAATTATATGGTGAACAAAGGCCAAAGTTCTGCTGT
CAGCACTAGAACGCCTGAAGCACCGGCCTGATGGGAAATACGTGGTGGTGACTGGAATAACTCCAACACCCCTGG
GAGAAGGGAAAAGCACAACTACAATCGGGCTAGTGCAAGCCCTTGGTGCCCATCTCTACCAGAATGTCTTTGCGT
GTGTGCGACAGCCTTCTCAGGGCCCCACCTTTGGAATAAAAGGTGGCGCTGCAGGAGGCGGCTACTCCCAGGTCA
TTCCTATGGAAGAGTTTAACTCTCCACCTCACAGGTGACATCCATGCCATCACTGCAGCTAATAACCTCGTTGCTG
CGGCCATTGATGCTCGGATATTTTCATGAACTGACCCAGACAGACAAGGCTCTCTTTAATCGTTTGGTGCCATCAG
TAAATGGAGTGAGAAGGTTCTCTGACATCCAAATCCGAAGGTTAAAGAGACTAGGCATTGAAAAGACTGACCCTA
CCACACTGACAGATGAAGAGATAAACAGATTTGCAAGATTGGACATTGATCCAGAAACCATAACTTGGCAAAGAG
TGTTGGATACCAATGATAGATTCTCTGAGGAAGATCACGATTGGACAGGCTCCAACGGAGAAGGGTCACACACGGA
CGGCCCAGTTTGATATCTCTGTGGCCAGTGAAATTATGGCTGTCTTGGCTCTCACCACCTTCTCTAGAAGACATGA
GAGAGAGACTGGGCAAAATGGTGGTGGCATCCAGTAAGAAAGGAGAGCCCGTCAGTGCCGAAGATCTGGGGGTGA
GTGGTGCACCTGACAGTGCTTATGAAGGACGCAATCAAGCCCAATCTCATGCAGACACTGGAGGGCACTCCAGTGT
TTGTCCATGCTGGCCCCGTTTGCCAACATCGCACATGGCAATTCCTCCATCATTGCAGACCAGATCGCACTCAAGC
TTGTTGGCCCAGAAGGGTTTGTAGTGACGGAAGCAGGATTGGAGCAGACATTGGAATGGAAAAGTTTTTTAACA
TCAAATGCCGGTATTCCGGCCTCTGCCCCACGTGGTGGTGTCTTGTGCCACTGTGAGGGCTCTCAAGATGCACG
GGGGCGGCCCCACGGTCACTGCTGGACTGCCTCTTCCCAAGGCTTACATACAGGAGAACCTGGAGCTGGTTGAAA
AAGGCTTCAGTAACCTGAAGAAACAAATTGAAAATGCCAGAATGTTTGGAATTCAGTAGTAGTGCCGTGAATG
CATTCAAGACGGATACAGAGTCTGAGCTGGACCTCATCAGCCGCCTTTCCAGAGAACATGGGGCTTTTGATGCCG
TGAAGTGCACCTCACTGGGCAGAAGGGGGCAAGGGTGCTTAGCCCTGGCTCAGGCCGTCCAGAGAGCAGCACAAAG
CAGGAGCAGCTTCCAGCTCCTTTATGACCTCAAGCTCCAGTTGAGGATAAAATCAGGATCATTGCACAGAAGA
TCTATGGAGCAGATGACATTGAATTACTTCCCGAAGCTCAACACAAAGCTGAAGTCTACACGAAGCAGGGCTTTG
GGAATCTCCCCATCTGCATGGCTAAAACACACTTGTCTTTGTCTCACAACCCAGAGCAAAAAGGTGTCCCTACAG
GCTTCATTCTGCCCATTCGCGACATCCGCGCCAGCGTTGGGGCTGGTTTTCTGTACCCCTTAGTAGGAACGATGA
GCACAATGCCTGGACTCCCCACCGGCCCTGTTTTATGATATTGATTTGGACCCTGAAACAGAACAGGTGAATG
GATTATTCT**TAA**ACAGATCACCATCCATCTTCAAGAAGCTACTTTGAAAGTCTGGCCAGTGTCTATTGAGGCCAC
TGGGAGTTAGGAAGTATAAGTAAGCCAAGAGAAGTCAGCCCCTGCCAGAAGATCTGAAACTAATAGTAGGAGTT
TCCCCAGAAGTCATTTTACGCTTAATTCTCATCATGTATAAATTAACATAAATCATGCATGTCTGTTTACTTTA
GTGACGTTCCACAGAATAAAAGGAAACAAGTTTGC

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FIGURE 195

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKATHIKLPRT
TTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIAPKDVGLTSINAGRLARGDLNDCFIPCTPK
GCLELIKETGVPIAGRHAVVGRSKIIVGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGDIIVVATGQPEMVKGE
WIKPGAIVIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVPGGVGPMTVAMLMQSTVESAKRFLEKFKP
GKMMIQYNNLNLKTPVPSDIDISRSCKPKPIGKLAREIGLLSEEVELYGETKAKVLLSALERLKHDPGKYVVVT
GITPTPLGEGKSTTTIGLVQALGAHLYQNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNHLHTGDIHAIT
AANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDIDP
ETITWQRVLDTNDRFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLDMRERLGMVVASSKKGEPV
SAEDLGVSGALTVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSSIIADQIALKLVGPEGFVTEAGFGADI
GMEKFFNIKCRYSGLCPHVVLVATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFNLKKQIENARMFGI
PVVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAAQAVQRAAQAPSSFQLLYDLKLPVEDK
IRIIAQKIYGADDIELLPEAQHKADEVYTKQGFNLPICMKTHLSLSHNPQKGVPTGFILPIRDIRASVGAGFL
YPLVGTMTMPGLPTRPCFYDIDLDPETE QVNGLF

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FIGURE 196

CGCGATTCTCAGGGATTGATCCGCCTCTTCAGGTAAGTTATCTTCCGGCCCCGTACCACTGTGCCACAGGCGCAG
CCCGCTTCCTCAGGTGCCCTATCCCGCGCAGAAGACCACGGCTTCACAGAGTGTTATTTAAGGGCGTGGCCAGCG
GAACATCCCCGCCCATTTCTGTGACGCACGGGTGGCGCGCGTGGGACCCGAGGGGTGGGGCTGGGTTTAGTAGGA
GACCTGGGGCAAGGCCCCCTGTGGACGACCATCTGCCAGCTTCTCTCGTTCCGTGCGATTGGGAGGAGCGGTGGCG
ACCTCGGCCCTTCAGTGTTTCCGACGGAGTGAATGGCGGCGCGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGC
GGGTGGGTGCGGTGCTGGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGTCATGCTGCTGATCGCCTG
CGCCTTCACCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCAGCTGCCCGCAGGGGTGAA
AAGTCCTCCATACATTTTCTCCCAATTCCATTTCCTTGGGCATGCCATAGCATTGGGAAAAGTCCAATTGAATT
TCTAGAAAAATGCATATGAGAAGTATGGACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCT
GGGGAGTGATGCTGCTGCTGCTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCT
GACAACACCTGTGTTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTTGGAGCAGAAGAAAATGTT
AAAAAGTGGCCTTAACATAGCCCACTTTAAACAGCATGTTTCTATAATTGAAAAAGAAACAAAGGAATACTTTGA
GAGTTGGGGAGAAAAGTGGAGAAAAAAATGTGTTTGAAGCTCTTTCTGAGCTCATAATTTTAAACAGCTAGCCATTG
TTTGCATGGAAAGGAAATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTTGGATGGAGGTTT
CAGCCATGCAGCCTGGCTCTTACCAGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGACAGAGCTCATCGGGA
AATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCTCAAGAAAAAATTGATGACATTCTCCAAAC
TTTACTAGATGCTACATACAAGGATGGGCGTCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACT
CTTGGCAGGGCAGCATACATCCTCAACTACTAGTGCTTGGATGGGCTTCTTTTTTGGCCAGAGACAAAACACTTCA
AAAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTATGACCAGCTCAAGGA
TCTAAATTTACTTGATCGCTGTATAAAAGAAACATTAAGACTTAGACCTCCTATAATGATCATGATGAGAATGGC
CAGAACTCCTCAGACTGTGGCAGGGTATACCATTCTCCAGGACATCAGGTGTGTGTTTCTCCCACTGTCAATCA
AAGACTTAAAGACTCATGGGTAGAAGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGG
GGAAAAGTTTGCTATGTGCCATTTGGAGCTGGGCGTCATCGTTGTATTGGGAAAAATTTTGCCTATGTTCAAAT
TAAGACAATTTGGTCCACTATGCTTCGTTTATATGAATTTGATCTCATTGATGGATACTTTCCCACTGTGAATTA
TACAACTATGATTACACCCCTGAGAACCCAGTTATCCGTTACAAACGAAGATCAAAATGAAAAAGGTTGCAAGG
AACGAATATATGTGATTATCACTGTAAGCCACAAAGGCATTTCGAAGAGAATGAAGGTACAAAACAACTCTTGTA
GTTTACTGTTTTTTTTAAGTGTGTAATTTCTAAAAGCCAGTTTATGATTTAGGATTTTGTTAACTGAATGGTTCTAT
CAAATATAATAGCATTTTGACACATTTTCTAATAGTTATGATACTTATACATGTGCTTTCAGGAAGTTCCTTGGTG
AAACAATTGTTGAGGGGGGATCTAGGTAATTGGCAGATTCTAAATAATATAATTTCCAGATAGTAATTTTAAGAG
TACTCATCGCTCTTGCCAAATAAGTTCAGGGTATTCAAATCTTGGACTAGTCTGCAAGGTATAAAGAATAAAAA
TCCAGTGAGATACTTGAAACCACAGTTTATTATTATTTATCTGGGCAATTATTGTGTGTGTGAGGATGGAAGG
GTAGGGAATAATCGAACATCTAAAGCCTTGAATAAGAGAATACTAATTGTTTTGGTATGATGATACTCAGAAATG
GAGATATTATAGGAAAAAGAAATCCTTTGGAATTTTAACTAAAATCACTGCATATGGGAAATTAAGAGATCCAGG
ACCATATTTGATAAGAGTTCCTAAAAATAATGTAATTATTAATGCTAAAGACTGCTCATGTATCTTGATCTAATT
ACTAAATAAATTACATATTTATTTACCTGATAAATATGTATCTAGTTCTACAAGGTCACATTTATGTGGAAGTCC
AAAGTCAAGTCCTTAGGGGATAATTTGTTTTGGGCTCAGTTGTTCCCTGCTTCCTTTTTTTTTTTTTTTTTTTT
TTGAGATGGAGTCTCGCTCTGTGCCCAGGCTGGAGTGCAGTGGTGCATCTCAGCTCACTGCATCCTCTGCCTC
CCGGGTTCAAGCAATTCTCTGCCTCAGCCTCCCAAGTAGTTGGGATTACAGGCACCTGCCACCATGCCTGGCTAA
TTTTTTGATTTTTTAGTAGAGACGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACCTCCTGAGCCTCGTGAG
TCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCTTCCCTGCTTCCTCT
CTAGAATCCAATTAGGGATGTTTGTACTACTCATATTGATTAAACAGTTAACAACCTTTTTTCTTTTTTAAAT
GTGAGATCAGTGAACCTCTGGTTTTAAGATAATCTGAAACAAGGTCCTTGGGAGTAATAAAATTGGTCACATTCTG
TAAAGCACATTCTGTTTAGGAATCAACTTATCTCAAATTGTAACCTCGGGGCCTAACTATATGAGATGGCTGAAAA
AATACCACATCGTCTGTTTTCACTAGGTGATGCCAAAATATTTTGCTTTATGTATATTACAGTCTTTTTTAAAC
ACTGGAAGACTCATGTTAACTCTAATTGTGAAGGCAGAATCTCTGCTAATTTTTTCAGATTAAAAATCTCTTTGA
AAAAAT

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FIGURE 197

MAAAAGMLLLGLLQAGGSVLGQAMEKVTGGNLLSMLLIACAFTLSLVYLIRLAAGHLVQLPAGVKSPPIYIFSPIP
FLGHAIAFGKSPIEFLENAYEKYGPVFSFTMVGKTFITYLLGSDAAALLFNSKNEDLNAEDVYSRLTTPVFGKGVA
YDVPNPVFLEQKKMLKSGLNIAHFKQHVSIIIEKETKEYFESWGESGEKNVFEALSELIILTASHCLHGKEIRSOL
NEKVAQLYADLDGGFSHAALLPGWLPLPSFRRRDRAHREIKDIFYKAIQKRRQSQEKIDDILQTLDDATYKDGR
PLTDDEVAGMLIGLLLAGQHTSSTTSAWMGFFLARDKTLQKKCYLEQKTVCGENLPPLTYDQLKDLNLLDRCIKE
TLRLRPPIMIMMRMARTPQTVAGYTIPPGHQVCVSPTVNQRLKDSWVERLDFNPDRYLQDNPASGEKFAYVPFGA
GRHRCIGENFAYVQIKTIWSTMLRLYEFDLIDGYFPTVNYTTMIHTPENPVIRYKRRSK

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FIGURE 198

TCGGGAAGCCATAGGGCGCCTCCCAGCCCGTCTCCCCGCTCCAGTTTAGAACCTAATTCCCAATTCCCGGACCGG
GCCAGCCCTGGGCTCTTACTGTCCGCTTTTGCTGGGACCTGTTCCACAAATGGGCGTCTTCTGCCTTGGGCCGT
GGGGGTGGGCCGGAAGCTGCGGACGCCTGGGAAGGGGCGCTGCAGCTCTTGAGCCGCCTCTGCGGGGACCACT
TGCAGGCCATCCCAGCCAAGAAGGCCCGGCTGGGCAGGAGGAGCCTGGGACGCGCCCTCCTCGCCGCTGAGTG
CCGAGCAGTTGGACCGGATCCAGAGGAACAAGGCCGCGGCCCTGCTCAGACTCGCGGCCCGCAACGTGCCCGTGG
GCTTTGGAGAGAGCTGGAAGAAGCACCTCAGCGGGGAGTTCGGGAAACCGTATTTTATCAAGCTAATGGGATTG
TTGCAGAAGAAAGAAAGCATTACACTGTTTATCCACCCCCACACCAAGTCTTCACCTGGACCCAGATGTGTGACA
TAAAAGATGTGAAGGTTGTCATCCTGGGACAGGATCCATATCATGGACCTAATCAAGCTCACGGGCTCTGCTTTA
GTGTTCAAAGGCCTGTTCCGCCTCCGCCAGTTTGGAGAACATTTATAAAGAGTTGTCTACAGACATAGAGGATT
TTGTTTCATCCTGGCCATGGAGATTTATCTGGGTGGGCCAAGCAAGGTGTTCTCCTTCTCAACGCTGTCCTCACGG
TTCGTGCCCATCAAGCCAACTCTCATAAGGAGCGAGGCTGGGAGCAGTTCACTGATGCAGTTGTGTCTGGCTAA
ATCAGAACTCGAATGGCCTTGTTTTCTTGCTCTGGGGCTCTTATGCTCAGAAGAAGGGCAGTGCCATTGATAGGA
AGCGGCACCATGTACTACAGACGGCTCATCCCTCCCCTTTGTGAGTGTATAGAGGGTTCTTTGGATGTAGACACT
TTTCAAAGACCAATGAGCTGCTGCAGAAGTCTGGCAAGAAGCCCATTGACTGGAAGGAGCTGTGATCATCAGCTG
AGGGGTGGCCTTTGAGAAGCTGCTGTTAACGTATTTGCCAGTTACGAAGTTCCACTGAAAATTTTCTATTAATT
CTTAAGTACTCTGCATAAGGGGGAAAAGCTTCCAGAAAGCAGCCATGAACCAGGCTGTCCAGGAATGGCAGCTGT
ATCCAACCACAAACAACAAAGGCTACCCTTTGACCAATGTCTTTCTCTGCAACATGGCTTCGGCCTAAAATATG
CAGAAGACAGATGAGGTCAAATACTCAGTTGGCTCTCTTTATCTCCCTTGCCTTTATGGTGAAACAGGGGAGATG
TGCACCTTTTCAGGCACAGCCCTAGTTTGGCGCCTGCTGCTCCTTGGTTTTGCCTGGTTAGACTTTCAGTGACAGA
TGTTGGGGTGTTTTTGCTTAGAAAGGTCCCCTTGCTCAGCCTTGCCAGGGCAGGCATGCCAGTCTCTGCCAGTTC
CACTGCCCCCTTGATCTTTGAAGGAGTCCCTCAGGCCCTCGCAGCATAAGGATGTTTTGCAACTTTCCAGAACTCT
GGCCCAGAAATTAGGGCTCAATTTCTGATTGTAGTAGAGGTTAAGATTGCTGTGAGCTTTATCAGATAAGAGAC
CGAGAGAAGTAAGCTGGGTCTTGTTATTCTTGGGTGTTGGTGGAATAAGCAGTGGAATTTGAACAAGGAAGAGG
AGAAAAGGGAAATTTGTCTTTATGGGGTGGGGTGATTTTCTCCTAGGGTTATGTCCAGTTGGGGTTTTTAAGGCA
GCACAGACTGCCAAGTACTGTTTTTTTTTAACCGACTGAAATCACTTTGGGATATTTTTTCTGCAACACTGGAAA
GTTTTAGTTTTTTAAGAAGTACTCATGCAGATATATATATATATATTTTTTCCCAGTCCTTTTTTTAAGAGACGGT
CTTTATTGGGTCTGCACCTCCATCCTTGATCTTGTTAGCAATGCTGTTTTTGCTGTTAGTCGGGTTAGAGTTGGC
TCTACGCGAGGTTTGTTAATAAAAGTTTGTTAAAAGTTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 199

MIGQKTLYSFFSPSPARKRHAPSPEPAVQGTGVAGVPEESGDAAAIPAKKAPAGQEEPCTPPSSPLSAEQLDRIQ
RNKAAALLRLAARNVPVGFGEWKKHLSGEFGKPYFIKLMGFVAEERKHYTVYPPPHQVFTWTQMCDIKDVKVVI
LGQDPYHGPNQAHGLCFVQRPVPPPPSLENIYKELSTDIEDFVHPGHGDLGWAKQGVLLLNAVLTVRAHQANS
HKERGWEQFTDAVVSWLNQNSNGLVFLWGSYAQKKGSAIDRKRHHVLQTAHPSPLSVYRGFFGCRHFSKTNELL
QKSGKKPIDWKEL

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FIGURE 200

ACCGCCGACGCAGACCCCTCTCTGCACGCCAGCCCGCCCGCACCCACCATGGCCACAGTTCAGCAGCTGGAAGGA
AGATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAA
ATGGGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGTAAAAACCTCACCATAAAAACTGAGAGCACT
TTGAAAACAACACAGTTTTTCTTGTACCCTGGGAGAGAAAGTTTGAAGAAACCACAGCTGATGGCAGAAAAACTCAG
ACTGTCTGCAACTTTACAGATGGTGCATTGGTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACATAACAAGA
AAATTGAAAGATGGGAAATTAGTGGTGGAGTGTGTCATGAACAATGTCACCTGTACTCGGATCTATGAAAAAGTA
GAATAAAAAATTCCATCATCACTTTGGACAGGAGTTAATTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCT
CCATACTGTTTCTTTCTTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCATAAACATTTTACATGCAGCTAT
TTCAAAGTGTGTTGGATTAAATTAGGATCATCCCTTTGGTTAATAATAAATGTGTTTGTGCT

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FIGURE 201

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSTLGEKFEE
TTADGRKTQTVCNFTD GALVQHQEWDGKESTITRKLKDGLVVECMNNVTCTRIYEKVE

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FIGURE 202

GGGACTACATTTCCAGGGGGCAGAGGCAGGGGCGGGAGGGGGCGGGCCCCGGCGCTGCTCCCGCCCCCTCCCCCG
TGCTCGCGGGGAGAGGTAAACAAACCACGCGCGGGCTGCCCGCGGCACGGCGGGCGCGGCTGGCGCGGCTGGGGC
GGCAGGGGGCGGCGGAGAGCGCGCCGAGCCGCGGCCGAGCTGGCCCCGCCCGCCCGTGCACATGTTCCGGAACGGC
GCCCGGCCGTAGCCGCCTGCGGCGCCTCCTGTGCGGCCGAGAAGGGAGTGCGGAGAGGGCGCCGGTCCGCCACCCGC
GGTCCCCATGGAGCGGGTGAAGATGATCAACGTGCAGCGTCTGCTGGAGGCTGCCGAGTTTTTTGGAGCGCCGGGA
GCGAGAGTGTGAACATGGCTACGCCTCTTCATTCCCGTCCATGCCGAGCCCCGACTGCAGCATTCAAAGCCCCC
ACGGAGGTTGAGCCGGGCACAGAAACACAGCAGCGGGAGCAGCAACACCAGCACTGCCAACAGATCTACACACAA
TGAGCTGGAAAAGAATCGACGAGCTCATCTGCGCCTTTGTTTAGAACGCTTAAAAGTTCTGATTCCACTAGGACC
AGACTGCACCCGGCACACAACACTTGGTTTTGCTCAACAAAAGCCAAAGCACACATCAAGAAACTTGAAGAAGCTGA
AAGAAAAAGCCAGCACCAGCTCGAGAATTTGGAACGAGAACAGAGATTTTTTAAAGTGGCGACTGGAACAGCTGCA
GGGTCTCAGGAGATGGAACGAATACGAATGGACAGCATTGGATCAACTATTTCTTCAGATCGTTCTGATTGAGA
GCGAGAGGAGATTGAAGTGGATGTTGAAAGCACAGAGTTCTCCCATGGAGAAGTGGACAATATAAGTACCACCAG
CATCAGTGACATTGATGACCACAGCAGCCTGCCGAGTATTGGGAGTGACGAGGGTTACTCCAGTGCCAGTGTCAA
ACTTTCATTCACTTCATTAGAACCCAGCATGACATAACAGTGCAGGGCAAAATATTCACTGGGCCAATTCAATACA
AACAACTCTTTAAATTGGGTTTCATGATGCAGTCTCCTCTTTAAAAACAAAACAAAACAAAACAAACTATACTTGA
ACAAAAGGGTCAGAGGACCTGTATTTAAGCAAATACTTAGCAAAAAGTGGGGCAGAGCCTCCCAAGGAGAACAAA
TATTCAGAAATTCATATTGGAAAAATCACAAATTTTTAATGGCAGCAGAAAACCTTGTGTGAAATTTTCTTGATT
GAGTTGATTGAGAAGAGGACATTGGAGATGCCATCCTCTTCTCTTTTCTAGTTTGCTCATACTACATTGAGTAG
ACACATTTAAGGATGGGGTTATGAACCTTCTCTGAGCTTTATGGTCCTAAAAGCAAAATAAAAACCTATTGGAATG
AAAAGACAAGAAAATCAGGTATTAATCTTGGATAGCTAATAATGAGCTATTAAAACCTCAGCCTGGGACAGTTTAT
CATGAAGCCTGTGGATGATCAATCCTTTATTATTATTTTTTTTTTTTGA AAAAAGCTCATTTTCATGCTCTGCAAA
AGGAGAGACTCCCATGAAGCCTTTTGAAGGGATCATCATGCAGCTCAACTTTCTGTTGGATTCCATGCTAAGCA
AGCTAACCTTATCCTGCATTGTTAGCACTAGGCACCCAGCTGCCACCTCTCCATCCTGCTGCCCTTAGGCCACAT
GGGAGCAGTCCATGCATGACAGCCTCTATCCTACAAGGCCTATGAGTATGGATTGGGGGGGCCAAAAGGAAAAAG
CTCCATGTGCCTCTTTGTCTGCGTGGGTGAGAAGAGTTGTGCACGCAGATTAGCAGGCCAAGGTCTGAGCCACAG
CAGCATTTTTTATTTTCAGATTTTGATAACTGTTTATATGTGTTGAAAAACCAAATGACATCTTTTTTAAAGCTTATC
CATAAAAAAAAATAGATGTCTTTTATAGTGGA AAAACACATGGGGGAAAAAATCATCTATTTTGATGCAGCATTT
GATAATGATAAAACACCTCACACCTCACTCTTTATAGTGCACAAAATGAATGAGGTCTGGGCTAGGTAGAAAAAG
GGTCAATGCTATTTTTGTTTTTAGAATCATTACCTTTTACCAGCTTTTAAACCATCTGATATCTATAGTAGACACA
CTATCATAGTTAACATAGTTAAGTTCAGCACTTGTCTCATTTTTAATGTAAAGATTTGCTTCCATTTTCCTACAGG
CAGTCTCTCTCTTCCCTCACAGTCCCACTGTGCAGGTGCTATTGTTACTCTTACGAATATTTTCAGTAATGTTATT
TTCTTCTAAGTGAAAATTTCTAGCCTGCACCTTTGATGTGATGTGTTCCCTTTGTCTTTCAAACCTCCAAGGTTCCCC
TGTGGCCCTCTCCCTTACCCTGGGAAGGCCTCTTGGAGACCTTACCCCTGGCTGTTTGGACTTTGTATACTTTAA
ATAATTTAACTACCCCTTAATTACTTAAAAA AAAAAAAGCTTTATGATTTTCATAACTTATTGCTGATTTTAAAT
GGATTGTTAATTTTCAGTCCTGTAGTTTTATTTTATGTTTAGATAGGGCTGGGCAAGGAAAAAGAAAATAAAGACA
ACCATATTTAGCAGTGCA

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FIGURE 203

MERVKMINVQRLLEAAEFLERRERECEHGYASSFPSMPSPRLQHSKPPRRLSRAQKHSSGSSNTSTANRSTHNEL
EKNRRAHLRLCLERLKVLIPLGPDCTRHTTLGLLNKAKAHIKKLEEAERKSQHQLLENLEREQRFLKWRLEQLQGP
QEMERIRMDSIGSTISSDRSDSEREEIEVDVESTEFSGEVDNISTTSISDIDDHSSLPSIGSDEGYSSASVKLS
FTS

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FIGURE 204A

CGGTGCTGGAGAAGTTTGCCTGCGGTTTCGTGAGCGCAGGGTGCGGGCCCCGCCGGCCGCTGCGCGCCCCGCTGCC
ATGGCTTTCCGCAGGAGGACGAAAAGTTACCCGCTCTTCAGCCAGGAGTTCGTTCATCCACAACCATGCGGACATC
GGCTTCTGCCTGGTGCTCTGCGTCTCATCGGGCTTATGTTTCGAGGTCACAGCCAAGACTGCCTTTCTATTTATT
TTACCTCAGTATAACATTAGCGTGCCTACAGCAGACAGTGAGACCGTGCACTACCACTATGGCCCTAAGGACCTG
GTCACAATCTTGTTCTACATCTTCATCACCATCATCTTGCATGCTGTGGTTTCAGGAGTACATTTTAGATAAAAATC
AGCAAACGGCTTCATCTCTCCAAAGTCAAACACAGCAAGTTCAATGAATCTGGACAGCTGGTCGTCTTTTCATTTT
ACCTCGGTGATTTGGTGCTTCTACGTGGTGGTGACGGAAGGATACTTAACAAACCCAAGAAGCCTCTGGGAAGAC
TACCCGCATGTGCACCTCCCTTCCAGGTGAAGTTTTTCTACCTATGCCAGCTGGCCTACTGGCTGCACGCACCTT
CCTGAGCTATACTTCCAGAAGGTACGGAAGGAGGAAATTCCCCGCCAGCTCCAGTATATTTGCCTGTACCTGGTG
CATATAGCTGGAGCATACCTCTTAAACCTGAGCCGCCTGGGCCTGATCTTGCTGCTGCTGCAGTACTCAACTGAG
TTCCTCTTCCACACGGCTAGACTCTTCTACTTTGCAGATGAAAACAACGAGAACTGTTTCAGTGCCCTGGGCTGCT
GTTTTTGGGGTTACCCGCCTCTTCATCCTCACCCCTTGCCGTGCTGGCCATTGGCTTTGGACTGGCTCGCATGGAA
AACCAGGCATTTGATCCCGAGAAAGGGAACCTTCAACACTTTGTTTTGCAGGCTCTGCGTGCTGCTGCTGGTGTGT
GCCGCCCAGGCCTGGCTCATGTGGCGCTTCATCCACTCCCAGCTGCGGCACTGGCGGGAATACTGGAATGAGCAG
AGTGCAAAGCGGAGAGTCCCAGCCACACCCAGACTACCAGCCAGGCTCATCAAGAGGGAATCTGGTTACCATGAA
AATGGAGTGGTGAAGGCAGAGAACGGAACCTCCCCACGGACTAAGAACTCAAGTCTCCCTTAAGGCCAAAGTGCT
AAGAACAGGAATCCTCTTGGTGGGGGCCGAGCAGGGGGCAAGGAGCCCAGGCCCCCTCCCTGCCTCCTCCTTCCT
GCCTGTGATGCTCCGTCTCAAACAGCCGAAACCTGTCTTGCAATGGGGGGAGGGGGCGTTTCGCTTTCCTTCTTC
TTGGCTTCCTCTTATTCTTCCACAAACCATTTCTCAATAAAGCCAAAAATCTTCTCTTCTCCCCCTCAGGCCAC
CTCCTGTCTCTACTCCTGTCTGTGCTGGCTTTTCTGGAACGCCAGGCGCCCATGGCTGGCACCTTTCTGCTTGC
TCTGTTTCTTGCTTATGGCTGCTGCTTTTCTTTTACTTCTTATTTTACCTTATCTTGCAATTTTTCTGTCT
GATTTTTACAATGGGAGGGGAGCTAAGATTGCAGTCTGCTTCCGTCCCCCAGGGCCTGCCGGTCAGAAGCCT
GGGGCTGGTAGGCCCTTGGTGGTCTCATGTGGATGGGCAAGAAGAGAGCGGCCATCTCGGATCATAATCTCCTT
GGTGCTGATTAACTGACGAGATATATGATTCCAGTTCGTGATGTACCATCTTGAGGCACAGCAGCCACTGCTCGT
TGTAATGCCAAGGCATTTGGCTTTGGGACGTGACAACCTCAATCCAGAAGGATGGTGTGAACTCGGTTGGGTCCC
GTGACTCGAGCTCCTACCAGTGGCTGGCCGCGGATTGGAAGCCAGCCTGCTGTGCTCTGTGGGGAGGACATGTC
TTCCCACTGCTTAGAGCGAGAGCAGAGCAAACCTGCGCAGCAGGCACCTCCAGAAAGGTAATGGTGGCAGAACCCA
CAGTGGAGTCGACCTAGGCCTTTCTCCAGCAGTCCCAGTCGCCATTGCTTTTTTTCAGCCATTACACAAGCATTCAA
ACCAAACCAAACAGCAGTTCATATACCTGCCTGAGATAGGCTGGTCTCTACCTCCAGAGCCAGCCAGCCCCGTCA
GGGGCCAAACTTACTACCTTGACTTCACTCTAGCTGCAGAAACACTAAGTCTCAAGGGCTTCAGCCCCATGCTG
GTCCCTTGGTGTTCAGGGAGGGTCACTTGGACCGCTGTTCACTGCGCCGCCCTTGTGAGTGTTCTTTGGAATTG
TCGTTTTTTGAGCACAACTACAGCATTTTAGACTGCATGAAACCATGACTGACTGAGAGTCACTCTCTGGGTAGA
TGATAGGCGCCTTTCTGGCCCCCTTCCCTCACAGATTCTTTCCCTCCCCTCCACCTGAAGAGAAGGCCTCCAAGT
CCTTTTGGTGCCTTGTGAGGACTTTTAGAAGGGGCGTTTCAGCTTTAAAAAGCCGGTCCCTAATTACGGCCGGACGC
AGTAGCTTACGCCTGTTATCCAGCACCTTGGGAGGTGAGGTGGGCAGATCACCTGAGGTTAGGAGTTCAAGAC
CAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAAATTAGGTGTAGTGGCAGGCACCTGTAA
TCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTAGAAGGTGGAGGTTGCAGTGAGCGGAGATTG
TACCATGGCACTCCAGCCTGGACAACAAGAGCGAAATCTGTCTAAAAAACAAGTCCCAATTAAGAACCTCC
GAACCTCTGTTTTGAGGCAAAGGGGAGTAGTTCTTGGTAGGTGCAGGAATAGTAGTGTCAATTTGGAATACTGGTCA
TCTTTCTGACATCACAGTAGAAACCAACCTTGGATTTAGATTCAAAGGGGGGAAATGGGTCTTTTTCATCAAGG
CAACTCCCCCTTCTCCAAGTCACTTACATCATAGATAAATTTTAGCTTCCCAGTAACTGAGGGATTTGTTTCTTAA
CGCCATTGGAGGCCTTCATCCCTCTCTACGATAAGGTTGCAGAAATGGGAAGAGCTACCCGTGGTTGCTTTTGAT
TACCTTAGGAAGTGAGACAGTGTTTTTGAATAATGTATTTCTCCATTCTCCTCTCCTTCCCTGACACTTC
TCTGGGCTGCACAGCAGAAACGTTGGTAAAAGGGCAGTTTGGTTTCAACACAGCAGACCTGATATGGGATCCCTT
AGCCACTTTAGTCAAACAGCCCTGACAGAGTCTATAATTGAGTTTCAGGCCCCCACCTTGCTTAATAACTGCAA
TCGCATGTTTCAGCCAGCAGCCTCCTAAGCCACCTTCTCCCCCATTAGAGAACACCCATCCTAGGTGCTCTCCA
GGCTGTGTCAATTGGCAGGGCTTCACATGCAGGAGGCCTCTCTCAGGTGAGTCCAGGTAAACTGTTGAGTTGTGG
CTTCAACAGATATGTATGGCATGCTGGGATGTGCCAGGTGCCTGCGTTGTGCCAGTTGCTGGAGAGGTAGTGTA

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FIGURE 204B

GCAGAGCAGCTGAAATCTTGCCATCAAGCAACCCCTCATTCTCATGCCTGTAGGTTTCCATTGCTCTGTCCCAGGA
CACTTGCGTGCCAGAGACGCCACAACCTTCATGTCCCTGTCTCTTGCAAGCTCCCCGTGCTGCCAGTACTTCATGC
CTTGATGTGGTCCCACCAGCCAGTGGCTGGGGTCAGCTTAGGCTCTGCTTCCCAGTGGACGGGTGTGCTAAGG
GTTTATTTTATGTAAAAAACAACCAAAAAAACCCTGAGACCATGAGTGGGGCTGGCATCTTGCCAGC
CTGGGCTTCAGGGATGTTTGGGGGGGGTGGTTAGAGGGTAGTTGTAGGGTACTTTGTACCCCCCTCCCCCTGCC
ACCCTCCCTGGCACGTTTATTTACAGCAGAGCCAAGTCTGTGGCAGGTTGACACAGACTGTGTTGCCAGAGCTG
AAATAATTCACCTTCATCCTATGAGCGTGTGGGGCTAGCTTGTCTAATTTTGGCCACTTTGGCTGTTTTCTTCA
GTTTTATGCATTCTCTCTGCCCAAAGTGCCAAAGCCATTGTGAAGGCTCTGCCAGACACCTCCAAGCTTGAGA
GCTCAGCACCATGCACCAAGAGCAGGAGAAAAAGACGTAAACCTACCCAGCAACTGTGGCCTCTCGACAGCCCTG
GCTAACTAAGTTACATTTGTGGGAAGCCAACAGACACAGCAGGAGGAGAGGGAGGTGGCGCTGGTGGACCAAGG
ATCTGTGCTACCCGCTCCCCCTCCTTGGAGGTGCAGTGATGATGGGAGTTATTTTTACCATCCGGGCGCTGATAGC
TGCACTATTAATAAATGCAIGTGTTCCTTTTGAAGGTAGGGGATGGTCTGGGTGAGAGGGGAGCAGGCTGAGC
CGCGGGGGATCTGCTGTCTCCTCCTTTTGAGTCAGTTCTAATCCCATGTGTGTCTGGGCCACCAGACCGAAATGG
TTGCTGAGAACTTGTCTGTTTATGTCTCCCAAGGCATAACTTCCCAACATTTAAGAAACCCCAATAGACACCTCTG
CCCTGGCCACGTTTACAGATCCTTCTCTTGACCGAAACCCCTGGGACCCTAAGAACCCCTGAAGCTTGGGGTGGG
TGTGTGCTTCTGGGGTCTCTTTTGGGACCTCCTTTGTGCTAGTACCCCTTCTTTTTTCTAAGCAGCTAATAAGAGGT
TGGGTGAAAGAGTGCATCTCCTCCCAGGATTCCACAACAAATTCCTATCTTCCATGGATGCTTTAATTGGAAGT
GGGTGCCGACCCCTTGTGCTAGAAAAGGCCTTTGCTTGGGTTTCTTTGTATGCTTCAGCCTTCCTAGTTGG
TTTTCTAGGCCTGGTGTGAGAGGTAGGGAAGTCTGCACATAACTAATTCTTTTGCTTAAGGGCCTATGGCACAA
GTGCACAACTTCAATTCCTGATGTTCTAAGCTCTCTCCTCTAACAGAGGGAGTGCTGAAAGCTTTTGAGTCAAG
ACAATGGAGTGCTCTTCTCCTCCTCCTCTGCTTCCGAGCTTATGGTTCCCTTTCTCAGGAGAGGATTTTCAGGA
TTATTGGAGGATTAGGTCAATGTGCTAGTACTGGAAAACCTAAATAGGATCTCTCTCCAGCTCAAGGTTGTCCCA
GTGAGGAAGACTTTACCAACTTCTCACTCTACCCCACTACTCACATGAGTGTTAGCTCCACCTTGCAAAGGCTGA
AGACCAGTTCTCCCCAGTGAAAGCTGCCTCATTCTTTTATGGAGTTCCCTGGAGTGGCAGAGCTATAAAGACGAG
CATTGGGATTTGCAGTCTCCATGTAGCCTTTTCGTGCTTGGCAACCCCTGTAGACTTTTTGTCCCAAGCAGATTGC
GTGCGTGCCTGTGTGTGAGAATAAGTGCCTTACTTTGCTGTGTGGTTTTCAACTTGTACTCCGTGGCCAGCCC
CCAGTTGCCAGGGCTCGACGGCAGCCAAGGACACCATACTCAGTATAGTTATATATAAAATGGACACGGATTGT
GACAGTTTACCCCATTTGTTTCTAACCCTGCTGCCCAGGATTAGGGTCTGTGGTGTGTTCTGTTTTGTTTTTGG
TTTCTCCCTTGTGTGCTGCTTCTTCTGGCCAGCTGGGTGGCTGTGGAAGTCTGTGAGGTGGCCCAACCACAAGC
ATACCTATTAAGAGAAGCCCAGAGCTTCCAGCCCCCACTTCGAAAACCTCTCCTCTGGCCCCACATAGCAAACCTCC
TTCTCCGTTATTTTCCCCACCCCAAGATTTTTTTTTAAAAGGCCCACTTGCCATAACCTCTTTTGGTCTATTTTGC
TTCCCATTCAGCCCAAAGTTTATATGATAAAGGTGTTTACTTTTACTTCCAGTCTCCAAGTGCTAACACATAAA
CACATACATGTCTGACTGTTGCAGAACTGTTTCGAGCTCCTAATTCAGTGTTACCTTGTTTTAGTCGCAGCAACCC
TCTCCCTACCCCTTGCCCGCCACGTTTTTCTCACTCTTCCGGGTGTGCAATAACTCTCCAGCCAGTGGTCC
TTTCCACAGCCTTTCTGTCCCTTAAAACACCTGCAACTGGGGGAGAAATGGGACCCATGGGAGGGGGAGTCATCA
TCCCTTACACAAGAAATAGCCACTTTCTTTTGTGTGCTATTCTTGTGATCCTGGGTGGGTTTCTGTGGCACTCTT
TTAGAACATGTAGCATCATCTTAGAGGTCTATTTTTAAAAAATGTGTTGAAGAGGAAAAAACATTCTCACGATG
GGGCTTAAGTCATTGTCCAGGAATAAGATTGGCGTGGTGGCCATGACATCACCGTCACTCTGCCTAAAAGCACTC
TAGAGCTACTTGTTCAGTGGAGAGGAAGGATATTTTGCAGAAACAGCCGCAGGTGGAGAGCCCTGTTACCT
GATAGGGTCTAGCTGTGACAGTAAATATAATACCGCTGTTTCTTGGGTACAGATTGAGTGTTTATGTGATGAG
ACTGTAAACCTCATTTTTCGGTTCTCTGTTTTAAAAAACATCTGAAGGATGAACTAAGGCTGCTGGTGGCCCTGA
GCAACTGATAATGCAATGTGGACAAAGTGTCTGTTTTCTACTCTAGCCTGTTTCATATGGACCAAATTTCAACAA
GGAACCTAAGGAAAAATTTGTACCTGCCGTATTTATGCTTTTCAATGTAAGGAGGGTGGGGGGAGGGGTGTCTTTT
TGCTTTTGGTGAACCTTTTTTTCAAAATCATTTTTTCCACTGTTTCTGTCTGGTTTTTAAACAAATTACAGTTTTGT
ATGGATTTTTTAAATGTACATTTTGAACAAATGATCAAAATTTTTCTGAAATAACAATAAAAGGCAGAAAATT

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FIGURE 205

MAFRRRTKSYPLFSQEFVIHNNHADIGFCLVLCVLI GLMF EVTAKTAF LFILPQYNISVPTADSETVHYHYGPKDL
VTILFYIFITII LHAVVQEYILDKISKRLHLSKV KHSKF NESGQLVVFHFTSVIWC FYVVVTEGYLTNPRSLWED
YPHVHLPFQVKFFYLCQLAYWLHALPELYFQKVRKEEIPRQLQYICLYLVHIAGAYLLNLSRLGLILLLLQYSTE
FLEHTARLFYFADENNEKLFSAWA AVFGVTRLFILT LAVLAIGFGLARMENQAFDPEKGNFNTLFCRLCVLLLV C
AAQAWLMWRFIHSQLRHWREYWNEQSAKRRVPATPRLPARLIKRESGYHENG VVKAENGTSPR TKKLKSP

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FIGURE 206

AAAACAGCCGGGGCTCCAGCGGGAGAACGATA**ATG**CAAAGTGCTATGTTCTTGGCTGTTCAACACGACTGCAGAC
CCATGGACAAGAGCGCAGGCAGTGGCCACAAGAGCGAGGAGAAGCGAGAAAAGATGAAACGGACCCCTTTTAAAAG
ATTGGAAGACCCGTTTGAGCTACTTCTTACAAAATTCCTCTACTCCTGGGAAGCCCCAAAACCGGCAAAAAAGCA
AACAGCAAGCTTTCATCAAGCCTTCTCCTGAGGAAGCACAGCTGTGGTCAGAAGCATTGACGAGCTGCTAGCCA
GCAAAATATGGTCTTGCTGCATTACAGGGCTTTTTTAAAGTCGGAATTCTGTGAAGAAAATATTGAATTCCTGGCTGG
CCTGTGAAGACTTCAAAAAACCAAATCACCCCAAAAGCTGTCTCAAAAAGCAAGGAAAATATATACTGACTTCA
TAGAAAAGGAAGCTCCAAAAGAGATAAACATAGATTTTCAAACCAAACTCTGATTGCCCAGAATATACAAGAAG
CTACAAGTGGCTGCTTTACAACCTGCCCAGAAAAGGGTATACAGCTTGATGGAGAACAACCTCTTATCCTCGTTTCT
TGGAGTCAGAATTCCTACCAGGACTTGTGTAAAAAGCCACAAATCACACAGAGCCTCATGCTACAT**TGA**AATGTAA
AAGGGAGCCCAGAAATGGAGGACATTTCAATCTTTTTCTGAGGGGAAGGACTGTGACCTGCCATAAAGACTGAC
CTTGAATTCAGCCTGGGTGTTTCAAGAAACATCACTCAGAACTATTGATTCAAAGTTGGGTAGTGAATCAGGAAGC
CAGTAACTGACTAGGAGAAGCTGGTATCAGAACAGCTTCCTCACTGTGTACAGAACGCAAGAAGGGAATAGGTG
GTCTGAACGTGGTGTCTCACTCTGAAAAGCAGGAATGTAAGATGATGAAAGAGACAATGTAATACTGTTGGTCCA
AAAGCATTTAAAATCAATAGATCTGGGATTATGTGGCCTTAGGTAGCTGGTTGTACATCTTCCCTAAATCGATC
CATGTTACCACATAGTAGTTTTAGTTTAGGATTCAGTAACAGTGAAGTGTTTACTATGTGCAAGGGTATTGAAGT
TCTTATGACCACAGATCATCAGTACTGTTGTCTCATGTAATGCTAAAACTGAAATGGTCCGTGTTTGCATTGTTA
AAAATGATGTGTGAAATAGAATGAGTGCTATGGTGTTGAAAACCTGCAGTGTCGGTTATGAGTGCCAAAAATCTGT
CTTGAAGGCAGCTACACTTTGAAGTGGTCTTTGAATACTTTTAATAAAATTTATTTTGATAATAATATTG

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FIGURE 207

MQSAMFLAVQHDCRPMDKSAGSGHKSEEEKREKMKRTLLKDWKTRLSYFLQNSSTPGKPKTGKKSQQAFAIKPSPE
EAQLWSEAFDELLASKYGLAAFRFLKSEFCEENIEFWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINI
DFQTKTLIAQNIQEATSGCFTTAQKRVYSLMENNSYPRFLESEFYQDLCKKPQITTEPHAT

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FIGURE 208

CTGCTCGCGGCCGCCACCGCCGGGCCCCGGCCGTCCCTGGCTCCCCTCCTGCCTCGAGAAGGGCAGGGCTTCTCA
GAGGCTTGCGGGGAAAAAAGAACGGAGGGAGGGATCGCGCTGAGTATAAAAGCCGGTTTTTCGGGGCTTTATCTAA
CTCGCTGTAGTAATTCCAGCGAGAGGCAGAGGGAGCGAGCGGGCGGCCGGCTAGGGTGGAAGAGCCGGGCGAGCA
GAGCTGCGCTGCGGGCGTCTTGGGAAGGGAGATCCGGAGCGAATAGGGGGCTTCGCCTCTGGCCAGCCCTCCCC
CTTGATCCCCCAGGCCAGCGGTCCGCAACCCCTTGCCGCATCCACGAAACTTTGCCCATAGCAGCGGGCGGGCACT
TTGCACTGGAACCTTACAACACCCGAGCAAGGACGCGACTCTCCCGACGCGGGGAGGCTATTCTGCCATTTGGGG
ACACTTCCCCGCCGCTGCCAGGACCCGCTTCTCTGAAAGGCTCTCCTTGACAGCTGCTTAGACGCTGGATTTTTTT
CGGGTAGTGGAACCAGCAGCCTCCCGCGACGATGCCCCCTCAACGTTAGCTTCACCAACAGGAACCTATGACCTC
GACTACGACTCGGTGCAGCCGTATTTCTACTGCGACGAGGAGGAGAACTTCTACCAGCAGCAGCAGCAGAGCGAG
CTGCAGCCCCCGCGCGCCAGCGAGGATATCTGGAAGAAATTGAGCTGCTGCCACCCCGCCCTGTCCCCTAGC
CGCCGCTCCGGGCTCTGCTCGCCCTCTACGTTGCGGTACACCCCTTCTCCCTTCGGGGAGACAACGACGGCGGT
GGCGGGAGCTTCTCCACGGCCGACCAGCTGGAGATGGTGACCGAGCTGCTGGGAGGAGACATGGTGAACCAGAGT
TTCATCTGCGACCCGACGACGAGACCTTCATCAAAAACATCATCATCCAGGACTGTATGTGGAGCGGCTTCTCG
GCCGCCGCAAGCTCGTCTCAGAGAAGCTGGCCTCCTACCAGGCTGCGCGCAAAGACAGCGGCAGCCCGAACCCC
GCCCCGCGCCACAGCGTCTGCTCCACCTCCAGCTTGTAACCTGCAGGATCTGAGCGCCGCGCCTCAGAGTGCATC
GACCCCTCGGTGGTCTTCCCCTACCCTCTCAACGACAGCAGCTCGCCCAAGTCCTGCGCCTCGCAAGACTCCAGC
GCCTTCTCTCCGTCTCTCGGATTCTCTGCTCTCCTCGACGGAGTCTTCCCCGAGGGCAGCCCCGAGCCCTGGTG
CTCCATGAGGAGACACCGCCACCAGCAGCGACTCTGAGGAGGAACAAGAAGATGAGGAAGAAATCGATGTT
GTTTCTGTGGAAAAGAGGCAGGCTCCTGGCAAAAGGTCAGAGTCTGGATCACCTTCTGCTGGAGGCCACAGCAAA
CCTCCTCACAGCCCACTGGTCTCAAGAGGTGCCACGTCTCCACACATCAGCACAACTACGCAGCGCCTCCCTCC
ACTCGGAAGGACTATCCTGCTGCCAAGAGGGTCAAGTTGGACAGTGTGAGAGTCTGAGACAGATCAGCAACAAC
CGAAAATGCACCAGCCCCAGGTCTCGGACACCGAGGAGAATGTCAAGAGGCGAACACACAACGTCTTGAGCGC
CAGAGGAGGAACGAGCTAAAACGAGCTTTTTTGCCCTGCGTGACCAGATCCCGGAGTTGGAAAACAATGAAAAG
GCCCCAAGGTAGTTATCCTTAAAAAAGCCACAGCATAACATCCTGTCCGTCCAAGCAGAGGAGCAAAAGCTCATT
TCTGAAGAGGACTTGTGCGGAAACGACGAGAACAGTTGAAACACAACTTGAACAGCTACGGAACCTTGTGCG
TAAGGAAGTAAGGAAAACGATTCTTCTAACAGAAATGTCTGAGCAATCACCTATGAACCTGTTTCAAATGC
ATGATCAAATGCAACCTCACACCTTGGCTGAGTCTTGAGACTGAAAGATTTAGCCATAATGTAACTGCCTCAA
ATTGACTTTGGGCATAAAAGAACTTTTTTATGCTTACCATCTTTTTTTTTCTTTAACAGATTGTATTTAAGA
ATTGTTTTTAAAAAATTTTAA

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FIGURE 209

MPLNVSF TNRNYDL DYDSVQPYFYCDEEENFYQQQQQSE LQPPAPSEDIWKKFELLPTPPLSPSRRSGLCSPSYV
AVTPFSLRGDNDGGGGSFSTADQLEMVTELLGGDMVNQSFICDPDDETFIKNII IQDCMWSGFSAAAKLVSEKLA
SYQAARKDSGSPNPARGHSVCSTSSLYLQDL SAAAASECIDPSVVFPYPLNDSSSPKSCASQDSSAFSPSSDSLLS
STESSPQGSPEPLVLHEETPPTTSSDSEEEQEDEEEIDVVSVEKRQAPGKRSESGSPSAGGH SKPPHSPLVLKRC
HVSTHQHNYAAPPSTRKDYPAAKRVKLD SVRVLRQISNNRKCTSPRSSDTEENVKRRTHNVLERQRRNELKRSFF
ALRDQIPELENNEKAPKV VILKKATAYILSVQAEEQKLI SEEDLLRKRREQLKHKLEQLRN SCA

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FIGURE 210

GGCAGGCATGGGAGCCGCGCGCTCTCTCCCGGCGCCACACCTGTCTGAGCGGCGCAGCGAGCCGCGGCCCGGGC
GGGCTGCTCGGCGCGGAACAGTGCTCGGCATGGCAGGGATTCCAGGGCTCCTCTTCCTTCTCTTTCTGCTCT
GTGCTGTTGGGCAAGTGAGCCCTTACAGTGCCCCCTGGAAACCACTTGGCCTGCATACCGCCTCCCTGTCGTCT
TGCCCCAGTCTACCTCAATTTAGCCAAGCCAGACTTTGGAGCCGAAGCCAAATTAGAAGTATCTTCTTCATGTG
GACCCAGTGTCATAAGGGAACTCCACTGCCCCACTTACGAAGAGGCCAAGCAATATCTGTCTTATGAAACGCTCT
ATGCCAATGGCAGCCGCACAGAGACGCAGGTGGGCATCTACATCCTCAGCAGTAGTGGAGATGGGGCCCAACACC
GAGACTCAGGGTCTTCAGGAAAGTCTCGAAGGAAGCGGCAGATTTATGGCTATGACAGCAGGTTTACGATTTTTG
GGAAGGACTTCCTGCTCAACTACCTTTCTCAACATCAGTGAAGTTATCCACGGGCTGCACCGGCACCCTGGTGG
CAGAGAAGCATGTCCTCACAGCTGCCCCACTGCATACAGATGGAAAAACCTATGTGAAAGGAACCCAGAAGCTTC
GAGTGGGCTTCCTAAAGCCCCAAGTTTAAAGATGGTGGTTCGAGGGGCCAACGACTCCACTTCAGCCATGCCCAGC
AGATGAAATTTTCAAGTGGATCCGGGTGAAACGCACCCATGTGCCCAAGGGTTGGATCAAGGGCAATGCCAATGACA
TCGGCATGGATTATGATTATGCCCTCCTGGAACCTCAAAAAGCCCCACAAGAGAAAATTTATGAAGATTGGGGTGA
GCCCTCCTGCTAAGCAGCTGCCAGGGGGCAGAATTCACCTTCTCTGTTATGACAATGACCGACCAGGCAATTTGG
TGTATCGCTTCTGTGACGTCAAAGACGAGACCTATGACTTGCTCTACCAGCAATGCGATGCCAGCCAGGGGCCA
GCGGGTCTGGGGTCTATGTGAGGATGTGGAAGAGACAGCAGCAGAAGTGGGAGCGAAAAATTTATTGGCATTTTTT
CAGGGCACCAAGTGGGTGGACATGAATGGTTCACAGGATTTCAACGTGGCTGTCAGAATCACTCCTCTCAAAT
ATGCCCAGATTTGCTATTGGATTAAAGGAACTACCTGGATTGTAGGGAGGGGTGACACAGTGTCCCTCCTGGC
AGCAATTAAGGGTCTTCATGTTCTTATTTTAGGAGAGGCCAAATTGTTTTTTGTCATTGGCGTGCACACGTGTGT
GTGTGTGTGTGTGTGTGTGTAAGGTGTCTTATAATCTTTTACCTATTTCTTACAATTGCAAGATGACTGGCTTTA
CTATTTGAAAAGTGGTTTGTGTATCATATCATATATCATTTAAGCAGTTTGAAGGCATACTTTTGCATAGAAATA
AAAAAATACTGATTTGGGGCAATGAGGAATATTTGACAATTAAGTTAATCTTCACGTTTTTGCAAACTTTGATT
TTTATTTTCTGAACTTGTTCAAAGATTTATATTAAATATTTGGCATAACAAGAGATATGA

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FIGURE 211

MAGIPGLLFLLFFLLCAVGQVSPYSAPWKPTWPAYRLPVVLPQSTLNLAKPDFGAEAKLEVSSSCGPQCHKGTPL
PTYEEAKQYLSYETLYANGSRTETQVGIYILSSSGDGAQHRDSGSSGKSRRKRQIYGYSRFSIFGKDFLLNYPF
STSVKLSTGCTGTLVAEKHVLTAAHCIHDGKTYVKGTQKLRVGFLKPKFKDGGRGANDSTSAMPEQMKEQWIRVK
RTHVPKGWIKGNANDIGMDYDYALLELKKPHKRKFMKIGVSPPAKQLPGGRIHFSGYDNDRPGNLVYRFCDVKDE
TYDLLYQQCDAQPGASGSGVYVRMWKRQQQKWERKIIGIFSGHQWVDMNGSPQDFNVAVRITPLKYAQICYWIKG
NYLDCREG

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FIGURE 212A

GGGACCGACGACACGCCCCCTCTCCTCCTTTGTTCCGGGGGTGCGCGGCCGCTCTCCTGCCAGAGCTCGGGATC
TCGGCCCCGGGAGGCGGGCGCTCGGGCGCAGCCGCGAAGATGCCGTTGGAAGTACGCGAGAGCCGAGTGCAGAAG
ATCTGGGTGCCCCGTGGACCACAGGCCCTCGTTGCCAGATCCTGTGGGCCAAAGCTGACCAACTCCCCACCGTC
ATCGTCATGGTGGGCCTCCCCGCCGGGGCAAGACCTACATCTCCAAGAAGCTGACTCGCTACCTCAACTGGATT
GGCGTCCCCACAAAAGTGTTCACGTGCGGGAGTATCGCCGGGAGGCTGTGAAGCAGTACAGCTCCTACAACTTC
TTCCGCCCCGACAATGAGGAAGCCATGAAAAGTCCGGAAGCAATGTGCCTTAGCTGCCTTGAGAGATGTCAAAAGC
TACCTGGCGAAAGAAGGGGGACAAATTGCGGTTTTTCGATGCCACCAATACTACTAGAGAGAGGAGACACATGATC
CTTCATTTTGGCAAAGAAAATGACTTTAAAGCGTTTTTCATCGAGTCGGTGTGCGACGACCCTACAGTTGTGGCC
TCCAATATCATGGAAGTTAAAATCTCCAGCCCGGATTACAAAGACTGCAACTCGGCAGAAGCCATGGACGACTTC
ATGAAGAGGATCAGTTGCTATGAAGCCAGCTACCAGCCCCCTCGACCCCGACAAATGCGACAGGGACTTGTGCGCTG
ATCAAGGTGATTGACGTGGGCCGGAGGTTCTTGGTGAACCGGGTGCAGGACCACATCCAGAGCCGCATCGTGTAC
TACCTGATGAACATCCACGTGCAGCCGCGTACCATCTACCTGTGCCGGCAGGCGGAGAACGAGCACAACCTCCAG
GGCCGCATCGGGGGCGACTCAGGCCTGTCCAGCCGGGGCAAGAAGTTTGCCAGTGCTCTGAGCAAGTTTCGTGGAG
GAGCAGAACCTGAAGGACCTGCGCGTGTGGACCAGCCAGCTGAAGAGCACCATCCAGACGGCCGAGGCGCTGCGG
CTGCCCTACGAGCAGTGAAGGCGCTCAATGAGATCGACGCGGGCGTCTGTGAGGAGCTGACCTACGAGGAGATC
AGGGACACCTACCCTGAGGAGTATGCGCTGCGGGAGCAGGACAAGTACTATTACCGCTACCCACCGGGGAGTCC
TACCAGGACCTGGTCCAGCGCTTGGAGCCAGTGATCATGGAGCTGGAGCGGCAGGAGAATGTGCTGGTTCATCTGC
CACCAGGCCGTCTGCGCTGCCTGCTTGCCTACTTCTTGGATAAGAGTGCAGAGGAGATGCCCTACCTGAAATGC
CCTCTTCACACCGTCTGAAACTGACGCCTGTGCTTATGGCTGCCGTGTGGAATCCATCTACCTGAACGTGGAG
TCCGTCTGCACACACCGGGAGAGGTGAGAGGATGCAAAGAAGGGACCTAACCCGCTCATGAGACGCAATAGTGTG
ACCCCGCTAGCCAGCCCCGAACCCACCAAAAAGCCTCGCATCAACAGCTTTGAGGAGCATGTGGCCTCCACCTCG
GCCGCCCTGCCAGCTGCCTGCCCCCGAGGTGCCACGCAGCTGCCTGGACAAAACATGAAAGGCTCCCGGAGC
AGCGCTGACTCCTCCAGGAAACACTGAGGCGAGACGTGTGCGTTCCATTCCATTTCATTCTGCAGCTTAGCTTG
TGCTCTGCCCTCCGCCCGAGGCAAAACGTATCCTGAGGACTTCTTCCGGAGAGGGTGGGGTGGAGCAGCGGGGA
GCCTTGGCCGAAGAGAACCATGCTTGGCACCGTCTGTGTCCCTCGGCCGTGGACACCAGAAAGCCACGTGGGT
CCCTGGCGCCTGCCTTTAGCCTGGGGGCCCCACCTCCACTCTCTGGGTTCTTAGGAATGTCCAGCCTCGGAGAC
CTTCACAAAGCCTTGGGAGGGTGATGAGTGTGCTGCTGACAAGAGGCCGCTGGGGACACTGTCCGTTTTGTTTT
GTTTTCTGTGATCTCCCGGCACGTTTGGAGCTGGGAAGACCACACTGGTGGCAGAATCCTAAAATTAAGGAGGCA
GCCTCCTAGTTGCTGAAAGTTAAGGAATGTGTAACCTCCACGTGACTGTTTGGTGCATCTTGACCTGGGAAGA
CGCCTCATGGGAACGAACTTGGACAGGTGTTGGGTTGACCCCTCTTCTGCAGGAAGTCCCTGAGCTGAGACGCAA
AGTTGGCTGGGTGGTGGTGGGCACCTGGCTCCTGCAGGTCCACACACCTTCCAGGCCTGTGGCCTGCCTCCAAA
GATGTGCAAGGGCAGGCTGGCTGCACGGGGAGAGGGAAGTATTTTGGCGAAATATGAGAACTGGGGCCTCCTGCT
CCCAGGGAGCTCCAGGGCCCCCTCTCTCCTCCACCTGGACTTGGGGGGAAGTGAAGAACTTTCTGGAGCTGC
TGGCTTTTGCACCTTTTTTGATGGCAGAAGTGTGACCTGAGAGTCCACCTTCTCTTCAGGAACGTAGATGTGGG
GTGTCTTGCCCTGGGGGGCTTGAACCTCTGAAGGTGGGGAGCGGAACACCTGGCATCCTTCCCCAGCACTTGCA
TTACGGTCCCTGCTCTTCCAAGGTGGGGACAGTGGCCCAAGCAAGGCCTCACACGCAGCCACTTCTTCAAGAGCT
GCCTGCACACTGTCTTGGAGCATCTGCCTTGTGCTGGCACTCTGCCGCTGCCTTGGGAAGGTGGTAAGAGTGG
ACTTTGTCTGGGCTTCCCTTCATGGCGTCTAGACACTTTTGTGGTGATGGAAAGCATGGGACCTGTGCTCTCAG
CCTGTTGGTTTTCTCCTCATTGCCTCAAACCTGGGGTAGGTGGAACGGGGGGTCTCGTGCCAGATGAAACCATT
TGGAACCTCGGCAGCAGAGTTTGTCCAAATGACCCTTTTCAGGATGTCTCAAAGCTTGTGCCAAAGGTCACTTTT
CTTTCTGCCTTCTGCTGTGAGCCCTGAGATCCTCCTCCAGCTCAAGGGACAGGTCTGGGTGAGGGTGGGAGA
TTTAGACACCTGAAACTGGGCGTGGAGAGAAGAGCCGTTGCTGTTTTTTTTGGGAAGAGCTTTTAAAGAATGC
ATATTTTTTTTACCTGGTTGGAATTGAGTAGGAACTGAGGCTGTGCTTCAGGTATGGTACAATCAAGTGGGGGATT
TTCATGCTGAACCCATTCAAAGCCCTCCCCGTCCCCGATTTCCAGGCCACCTTTGGCTGGCGTCTGCTGGAGA
GGATGTCTCTGTGCAATTCCCGTGCAGCTCAGCTCGCGCAGGTTTTCTCTCTCTCCTGGATGTTGAGCTCTCAT
CAGAATATGTGGGTGGGGGGTGGACGTGCACGGGTGCATGATTGTGCTTAACTTGGTTGATTTTTTCGATTTGAC
ATGGAAGCCTGTTGCTTTGCTCTAGAGAATAGTTTTCTCGTGTCCCTTCGCACGCCTCATTTTGAACCTCATC
TCTGATGTTTGATACAGATGGGGGCTTGATAGCTGTGGTCCCCTTTCCCTTCTGACTACGTGAAAATCAATACCT

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FIGURE 212B

AAATACAGAAGCCTTGGTCTAAACACCGAGACTTTTAGTTTGCGAAGGGGCTTAGATAGGGAGAGAGGTAACATG
AATCTGGACAGGGGAGGGAGATACTATAGAAAGGAGAACACTGCATACTTTGCAAAGCCAGTGACCTCCTTTTGA
AGGGGACATTGGACGGGGGCCGGGGCGGGGGTTTCGGTTTGACTACCGTCATGAACTTTTGGCGTATACTGATTC
CTCCAACCTCTCCACCCACAAAATAACGGGGACCAATATTTTTAACTTTGCCTATTTGTTTTGGGTGAGTTTCC
CCCCTCCATTATTCTGTCTGAGACCACGGGGCAAAGCTCTTCCATTTTGAGAGAGAAGAAAACTGTTTGAACC
ACACCAATGATATTTTTCTTTGTAATACTTGAAATTTATTTTTTTATTATTTTGATAGCAGATGTGCTATTTATT
TATTTAATATATGTATAAGGAGTCCTAAACAATAGAAAGCTGTAGAAGCTGTAGAGATAGGCTTCAGTTGTTAAT
TGGTTTGGAGCCTCCTATGTGTGACTTATGACTCTCTGTGTTCTGTGTATTTGTCTGAATTAATGACCTGGGATA
TAAAGCTATGCTAGCTTTCAAACAGGAGATGCCTTCAGAAAGCTTTGTATATTTGCAGTTGCCAGACCAATAAA
ATACCTGGTTGAAATACATGGACGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 213

MPLELTQSRVQKIWVPVDHRPSLPRSCGPKLTNSPTVIVMVGLPARGKTYISKKLTRYLNWIGVPTKVFNVGEYR
REAVKQYSSYNFFRPDNEEAMKVRKQCALAALRDVKSYLEGGQIAVFDATNTTRERRHMILHFAKENDFKAFF
IESVCDDPTVVASNIMEVKISSPDYKDCNSAEAMDDFMKRISCYEASYQPLDPDKCDRDLSLIKVIDVGRREFLVN
RVQDHIQSRIVYYLMNIHVQPRTIYLCRHGENEHNHQGRIGGDSGLSSRGKKFASALSKFVEEQNLKDLRVWTSQ
LKSTIQTAELRLPYEQWKALNEIDAGVCEELTYEEIRDTYPEEYALREQDKYYYRYPTGESYQDLVQRLEPVIM
ELERQENVLVICHQAVLRCLLAYFLDKSAEEMPYLKCPHVTVLKLTVPVAYGCRVESIYLNVESVCTHRERSEDAK
KGPNFLMRRNSVTPLASPEPTKKPRINSFEEHVASTSAALPSCLPPEVPTQLPGQNMKGSRSSADSSRKH

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FIGURE 214

GCGCCGCGGCGCGGAGTCCCGGCTGCGGGATAGACCGAGGGCCATGGCCGCCTCTCCCGGACCCGCCGGCGTTGG
CGGCGCCGGAGCAGTCTACGGCTCCGGCTCTTCGGGCTTCGCCCTCGACTCGGGACTGGAGATCAAACTCGCTC
GGTGGAGCAGACGCTACTCCCGCTGGTTTCTCAGATCACACGCTTATTAATCATAAAGATAATACCAAAAAGTC
TGATAAACTCTGCAAGCAATTCAGCGTGTAGGACAAGCTGTCAACTTGGCAGTTGGAAGATTTGTTAAAGTAGG
AGAAGCTATAGCCAATGAAAAGCTGGGATTTGAAAGAAGAAATAAATATTGCTTGTATTGAAGCTAAACAAGCAGG
AGAAACAATTGCAGCACTTACAGACATAACCAACTTGAACCATCTGGAATCTGATGGGCAGATCACAATTTTTAC
AGACAAAACAGGAGTGATAAAGGCTGCAAGATTACTTCTTCTTCAGTGACAAAAGTGTTGTTGCTGGCAGACCG
AGTAGTCATTAAACAGATAATAACATCAAGAAATAAGGTTCTCGCAACTATGGAAAGACTAGAGAAAGTGAATAG
CTTTCAGAGTTTGTCCAAATATTCAGTCAATTTGGAAATGAAATGGTGGAGTTTGCACATCTGAGTGGAGATAG
ACAAAATGATTTGAAAGATGAAAAGAAAAGGCCAAAAATGGCAGCAGCTAGGGCAGTTCTTGAAAAGTGTACAAT
GATGCTTCTCACAGCTTCAAAGACATGTCTGAGGCATCCTAACTGCGAATCAGCCATAAAAAACAAAGAAGGAGT
ATTTGACCGTATGAAAGTGGCATTGGATAAGGTCATTGAAATTTGTGACTGACTGTAAACCGAATGGAGAGACTGA
CATTTTCATCTATCAGTATTTTTACTGGAATTAAGGAATTCAGATGAATATTGAAGCTCTTCGGGAGAATCTTTA
TTTTTCAGTCCAAAGAGAACCTTTCTGTGACATTGGAAGTCATCTTGGAGCGTATGGAGGACTTTACTGATTCTGC
CTACACCAGCCATGAGCACAGAGAACGCATCTTGGAACTGTCAACTCAGGCGAGAATGGAAGTGCAGCAGTTAAT
TTCTGTGTGGATTCAAGCTCAAAGCAAGAAAACAAAAAGCATCGCTGAAGAACTGGAAGTCAAGTATTTTGAAGT
CAGTCACAGTCTTAATGAAGTAAAGAAAGAACTTCATAGTACAGCGACACAGCTGGCAGCAGATCTATTAAATA
CCATGCTGATCATGTGGTTCTAAAAGCATTAAAGCTTACTGGAGTAGAAGGAAATTTAGAAGCTTTGGCTGAATA
TGCCTGTAACTCTCTGAACAGAAAGAGCAGCTTGTGAGACCTGTCGATTGTTACGACACATATCTGGGACAGA
ACCTCTGGAAATAACCTGTATACATGCAGAGGAGACATTCAGGTGACTGGCCAACAGATAATTTCTGCTGCTGA
AACATTGACATTGCATCCATCTAGTAAAATTGCTAAAGAAAACCTAGATGTATTTTGTGAAGCTTGGGAATCCCA
AATTAGTGACATGTCAACACTGCTGAGAGAAATCAATGACGTGTTTGAAGGAAGACGAGGAGAGAAGTATGGCTA
CCTTTCACTTCCAAAGCCAATGAAGAATAATGCAAACCTGAAATCATTAAAGCCAGACAAGCCTGACTCTGAGGA
GCAAGCCAAGATAGCAAAGCTTGGACTTAAGCTGGGTTTGCTCACCTCTGACGCTGACTGCGAAATTGAGAAGTG
GGAAGATCAGGAGAATGAGATTGTTCAATATGGACGGAACATGTCCAGTATGGCCTATTCTCTGTATTTATTTAC
TAGAGGAGAGGGGCCACTGAAAACCTCCAGGATTTAATTCATCAACTAGAGGTTTTTGCTGCAGAGGGTTTAAA
GCTTACTTCCAGTGTTCAGCTTTTTTCAAAACAGCTGAAAGACGATGACAAGCTTATGCTTCTCCTGGAAATAAA
CAAGCTAATTCCTCTATGCCACCAGCTCCAGACAGTAACTAAGACTTCTTTGCAGAATAAAGTATTTCTAAAGGT
TGACAAGTGTATTACGAAGACAAGATCCATGATGGCTCTCTTAGTCCAACCTCTTTCACTTTGTTATAAACTGCT
GAAGAAGCTTCAGATGGAAAATAACGGATGGGTCTCAGTTACAAATAAGGACACTATGGATAGTAAACTTGAGA
AGCTTTTGGGGTCAGATCTCTGGAACATCATGTGATGAAGCTGACATTTTAAAAATCAAATGATCCTTTATCTT
TTCAGAAATTCATCAATTTTATAAAGAAAACAATATTGAAATTTTGCTCTATTTTCTGATCATGAAACTGATTGT
AAAGCTTTTGGACAATAAATGTCTTGGTAATTGCTAGATTCT

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FIGURE 215

MAASPGPAGVGGAGAVYGS SSGFALDSGLEIKTRSVEQTLLPLVSQITTLINHKDNTKKS DKT LQAIQRVGQAV
NLAVGRFVKVGEA IANENWDLKEEINIACIEAKQAGETIAALTDITNLNHLESDGQITIFTDKTGVIKAARLLLS
SVTKVLLLADRVVIKQIITSRNKV LATMERLEKVNSFQEFVQIFSQFGNEMVEFAHLSGDRQNDLKDEKKKAKMA
AARAVLEKCTMMLLTASKTCLRHPNCESAHKNKEGVFDRMKVALDKVIEIVTDCKPNGETDISSISIFTGIKEFK
MNI EALRENLYFQSKENLSVTLEVILERMEDFTDSAYTSHEHRERILELSTQARMELQQLISVWIQAQSKKTKSI
AEELLSILKISHSLNELKKELHSTATQLAADLLKYHADHVVLKALKLTGVEGNLEALAEYACKLSEQKEQLVET
CRLLRHISGTEPLEITCIHAEETFQVTGQQIISAAETLTLHPSSKIAKENLDVFCEAWESQISDMSTLLREINDV
FEGRRGEKYGYLSLPKPMKNNANLKS LKPDKPDSEEQAKIAKLGLKLGLLTSDADCEIEKWEDQENEIVQYGRNM
SSMAYSLYLFTRGEGPLKTSQDLIHQLEVFAAEG LKLTSSVQAFSKQLKDDDKLMLLLEINKLIPLCHQLQTVTK
TSLQNKVFLKVDKCITKTRSMALLVQLLSLCYKLLKKLQ MENNGWVSVTNKDTMDSKT

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FIGURE 216

CGAGGTTCTGGGTCGTGGGGCGGAGGGAAGAGCGGGCGGGCGGGAGGCGCCGGCGCCAGACGCGGAGGGAAGGAGC
TACGAGTAGCCGCCGAGAGGCCGCGGAGCCAGCGACGACCGACCCAGCCGAGCCGCGCCGCCGCCGCCGCCA
TGGCGGCCGCCAAGGACACTCATGAGGACCATGATACTTCCACTGAGAATACAGACGAGTCCAACCATGACCCTC
AGTTTGAGCCAATAGTTTTCTCTTCCTGAGCAAGAAATTAACACTGGAAGAAGATGAAGAGGAACTTTTTTAAAA
TGCGGGCAAACTGTTCCGATTTGCCTCTGAGAACGATCTCCCAGAATGGAAGGAGCGAGGCACTGGTGACGTCA
AGCTCCTGAAGCACAAAGGAGAAAGGGGCCATCCGCCTCCTCATGCGGAGGGACAAGACCCCTGAAGATCTGTGCCA
ACCACTACATCACGCCGATGATGGAGCTGAAGCCCAACGCAGGTAGCGACCGTGCCTGGGTCTGGAACACCCACG
CTGACTTCGCCGACGAGTGCCCCAAGCCAGAGCTGCTGGCCATCCGCTTCCTGAATGCTGAGAATGCACAGAAAT
TCAAACAAAGTTTGAAGAATGCAGGAAAGAGATCGAAGAGAGAGAAAAGAAAGCAGGATCAGGCAAAAATGATC
ATGCCGAAAAAGTGGCGGAAAAGCTAGAAGCTCTCTCGGTGAAGGAGGAGACCAAGGAGGATGCTGAGGAGAAGC
AATAAATCGTCTTATTTTATTTTCTTTTCCTCTCTTTCTTTCTTTTTTAAAAAATTTTACCCTGCCCTCTT
TTTCGGTTTGTTTTATTCTTTCATTTTACAAGGGACGTTATATAAAGAACTGAACTC

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FIGURE 217

MAAAKDTHEDHDTSTENTDESNHDPQFEP IVSLPEQEIKTLEEDDEEELFKMRACLFRFASENDLPEWKERTGDV
KLLKHKEKGAIRLLMRRDKTLKICANHYYITPMELKPNAGSDRAWVWNTHADFADEC PKPELLAIRFLNAENAQK
FKTKFEECRKEIEEREKKAGSGKNDHAEKVAEKL EALSVKEETKEDAEKQ

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FIGURE 218A

GTGGGGTGGGGTGGGGCTGGGGGCTTGTGCGCCCTTTCAGGCTCCACCCTTTGCGGAGATTATAAATAGTCATGAT
 CCCAGCGAGACCCAGAGATGCCTGTAATGGTGAGACTTTGGATCCTTCCTGAGGACGTGGAGAAAACCTTTCTGCT
 GAGAAGGACATTTTGAAGGTTTTGTTGGCTGAAAAAGCTGTTTCTGGAATCACCCCTAGATCTTTCTTGAAGACT
 TGAATTAGATTACAGCGATGGGGACACAGAAGGTCACCCACAGCTCTGATATTTGCCATCACAGTTGCTACAATCG
 GCTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAA
 CTTTGACGGACAAGGGAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTCTGGTCCTTGTCTGTGGCCATAT
 TTCCGTCGGGGGTATGATCGGCTCCTTTTCCGTCGGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGC
 TGATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGC
 TGATCCTGGGTCGCTTGGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGA
 TCTCGCTACTGCCCTGCGGGGTGCCTTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTTCTGGTGGCCC
 AGATCTTTGGTCTGGAATTCATCCTTGGGTCTGAAGAGCTATGGCCGCTGCTACTGGGTTTTACCATCCTTCCTG
 CTATCCTACAAAGTGCAGCCCTTCCATTTTGCCTGAAAGTCCCAGATTTTGTCTATTAACAGAAAAGAAGAGG
 AGAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATG
 AGAGTGCAAGGATGTCAACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTAGAGTGTCCAGCTACCGACAGCCCA
 TCATCATTTCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAA
 TCTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTG
 TAGTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCTTGGAGGGATGGCTTTTT
 GTCCACGCTCATGACTGTTTTCTTTGTTATTAAAGGATAACTATAATGGGATGAGCTTTGTCTGTATTGGGGCTA
 TCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCCATTCCCTGGTTTATTGTGGCCGAACCTCTTCAGCC
 AGGGCCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTGGACCTCCAACCTCCTAGTCGGATTGCTCT
 TCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTATTATCTTCACCGGCTTCCTCATTACCTTCTTGGCTT
 TTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGGCCTTTGAAGGGCAGGCAC
 ACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTGCTAAGGAGACCACCACCA
 ATGTCTAAGTCGTGCCTCCTTCCACCTCCCTCCCGGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCT
 CATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCACGCACTCCATGAGCACC
 CCAAGGCTGCGGTTTGTGGATCTTCAATGGCTTTTTAAATTTTATTTCCTGGACATCCTCTTCTGCTTAGGAGA
 GACCGAGTGAACCTACCTTCATTTCAGGAGGGATTGGCCGCTTGGCACATGACAACTTTGCCAGCTTTTCTCCC
 TTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTTCCCCCAACCTCAGACTTA
 CCAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTATTATGTAAGAGCACCTTCCTCACTTCCATACAGC
 TCTACGTGGCAAAATAACTTGAGTTTTATTTATTTTATCTCTGGTTTAATTACATAATTTTTTTTTTTTTACTT
 TAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCCATGATGGAATATTTAT
 TTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGAGGTGTTTAAAGAGAGGT
 TATAGAGTAGAAGATTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTTATTATTGG
 AGGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCTTCAGATGGAACTCTTTA
 ACTTCTCGTAAAGTCATATACCTATATAATAAAGCTACTGATTTTCTTGGAGCTTTTTTCTTTAAGATAATAGT
 TTACATGTAGTAGTACTTGAAATCTAGGATTATTAATAATATGGGCATTGTAGTTAATGATGGTTGATGGGTTT
 TAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCCCTCACTGGATGAAATAACTCC
 TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC
 TAAATAAATTGGTTCTTGGTAGAGATTCAATATTTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC
 TGTTGTATTTTAACTCATACCTTTTAAAGGAATCCCCAAAGAATGTTTATAGCAAACTTGAATTTGTAACCTCA
 GCTCTGGGAGAGGATTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC
 GTATGTCTGTTACCATGTCACTGTGGTCCATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG
 TTTAGACAGTATGAGTCAATGTGCAGTGTAGCCACACTTGAGAGGATGAATGTATGTGCACTGTCACTTTGCTC
 TGGGTGGAAGTACGTTATTGTTGACTTATTTTCTCTGTGTTTGTTCCTACAGCCCTTTTTCATATGTTGCTCAG
 TCTCCCTTTCCCTTCTTGGTGTCTACACATCTCAGACCCTTTAGCCAAACCCTTGTGAGTGACAGTATTTTGGTT
 CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC
 TCACGCCTGTAATCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTTGAGACCAGTCTGGCCAACATCG
 TGAAACCCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCTGTAATCCAGCTACTTGG

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FIGURE 218B

GAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAGATCGCATCATTGCACTCT
AGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATCGAGTGTGCTTTAGCTTGA
AAAGGTGACCTTGCAACTTCATGTCAACTTTCTGGCTCCTCAAACAGTAGGTTGGCAGTAAGGCAGGGTCCCATT
TCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCTTTGTTTTAAATAAAAA
TTCTGAATGTACACG

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FIGURE 219

MGTQKVTPALIFAITVATIGSFQFGYNTGVINAPEKIIKEFINKTLTDKGNAPPSEVLLTSLWSLSVAIFSVGGM
IGSFVGLFVNRFGRNSMLIVNLLAVTGGCFMGLCKVAKSVEMLILGRLVIGLFCGLCTGFVPMYIGEISPTAL
RGAFGTNLQLGIVVGILVAQIFGLEFILGSEELWPLLLGFTILPAILQSAALPFCPEsprfLLINRKEEENAKQI
LQRLWGTQDVSQDIQEMKDESARMSQEKQVTVLELFRVSSYRQPIIISIVLQLSQQLSGINAVFYYSTGIFKDAG
VQEPYATIGAGVVNTIFTVVSLEFLVERAGRRTLHMIGLGMAFCSTLMTVSLLLKDNYNMGMSFVCIGAILVFVA
FFEIGPGPIPWFIWAELFSQGPRAAMAVAGCSNWTSNFLVGLLFPSAAHYLGAYVFIIFTGFLITFLAFTFFKV
PETRGRTFEDITRAFEQAHGADRSGKDGVMEMNSIEPAKETTTNV

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FIGURE 220A

GTGGGGTGGGGTGGGGCTGGGGGCTTGTCGCCCTTTTCAGGCTCCACCCTTTGCGGAGATTATAAAATAGTCATGAT
CCCAGCGAGACCCAGAGATGCTGTAAATGGTGAGACTTTGGATCCTTCCTGAGGACGTGGAGAAAACTTTCTGCT
GAGAAGGACATTTTGAAGGTTTTTGTGGCTGAAAAAGCTGTTTCTGGAATCACCCCTAGATCTTTCTTGAAGACT
TGAATTAGATTACAGCGATGGGGACACAGAAGGTCACCCAGCTCTGATATTTGCCATCACAGTTGCTACAATCG
GCTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAA
CTTTGACGGACAAGGGAAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTCTGGTCCTTGTCTGTGGCCATAT
TTTCCGTCGGGGTATGATCGGCTCCTTTTCCGTCGGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGC
TGATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGC
TGATCCTGGGTGCTTGGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGA
TCTCGCCTACTGCCCTGCGGGGTGCCCTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTCGGTGGCCC
AGATCTTTGGTCTGGAATTCATCCTTGGGTCTGAAGAGCTATGGCCGCTGCTACTGGGTTTTACCATCCTTCCTG
CTATCCTACAAAGTGCAGCCCTCCATTTTGGCCTGAAAGTCCCAGATTTTTGCTCATTAACAGAAAAGAAGAGG
AGAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATG
AGAGTGCAAGGATGTCAACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTTAGAGTGTCCAGCTACCGACAGCCCA
TCATCATTTCCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAA
TCTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTG
TAGTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCCTTGAGGGGATGGCTTTTT
GTTCCACGCTCATGACTGTTTCTTGTATTATAAAGGATAACTATAATGGGATGAGCTTTGCTCTGATTGGGGCTA
TCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCATTTCCCTGGTTTTATTGTGGCCGAACCTCTTCAGCC
AGGGCCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTGGACCTCCAACCTTCCTAGTCGGATTGCTCT
TCCCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTATTATCTTACCGGCTTCCTCATTACCTTCTTGGCTT
TTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGGCTTTGAAGGGCAGGCAC
ACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTGCTAAGGAGACCACCACCA
ATGCTCTAAGTCGTGCCCTCCTTCCACCTCCCTCCCGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCT
CATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCCACGCACCTCCATGAGCACC
CCAAGGCTGCGGTTTTGTGGATCTTCAATGGCTTTTTAAATTTTATTTCTGGACATCCTCTTCTGCTTAGGAGA
GACCGAGTGAACCTACCTTCATTTAGGAGGGATTGGCCGCTTGGCACATGACAACCTTGCCAGCTTTTCTCTCC
TTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTCCCCCAACCTCAGACTTA
CCAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTATGTAAGAGCACCTTCCTCACTTCCATACAGC
TCTACGTGGCAAATTAACCTGAGTTTTATTTATTTTATCCTCTGGTTAATTACATAATTTTTTTTTTTTACTT
TAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCCATGATGGAAATATTTAT
TTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGAGGTGTTTAAAGAGAGGT
TATAGAGTAGAAGATTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTCAATTATTGG
AGGGTAAATGATGTGGTGCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCCTTCAGATGGAACTCTTTA
ACTTCTCGTAAAAGTCATATACCTATATAATAAAGCTACTGATTTCTTGGAGCTTTTTTCTTTAAGATAATAGT
TTACATGTAGTAGTACTTGAAATCTAGGATTATTAACATAATAGGGCATTGTAGTTAATGATGGTTGATGGGTTC
TAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCTCACTGGATGAAATAACTCC
TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC
TAAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC
TGTTGTATTTTAACTCATACCTTTAAAGGAATTCCTCAAGAATGTTTATAGCAAACCTGGAAATTTGTAACCTCA
GCTCTGGGAGAGGATTTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC
GTATGCTGTGTTACCATGTCACTGTGGTCTATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG
TTTAGACAGTATGAGTCAATGTGCAGTGTAGCCACACTTGAGAGGATGAATGTATGTGCACTGTCACTTTGCTC
TGGGTGGAAGTACGTTATTGTTGACTTAATTTCTCTGTGTTTGTTCCTACAGCCCCCTTTTTCATATGTTGCTCAG
TCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTGAGTGACAGTATTTTGGTT
CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC
TCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTCGAGACCAGTCTGGCCAACATCG
TGAAACCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCTGTAATCCCAGCTACTTGG

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FIGURE 220B

GAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAGATCGCATCATTGCACTCT
AGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATCGAGTGTGCTTTAGCTTGA
AAAGGTGACCTTGCAACTTCATGTCAACTTTCTGGCTCCTCAAACAGTAGGTTGGCAGTAAGGCAGGGTCCCATT
TCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCTTTGTTTTAAATAAAAA
TTCTGAATGTACACG

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FIGURE 221

MGTQKVTPALIFAITVATIGSFQFGYNTGVINAPEKIIKEFINKTLTLDKGNAPPSEVLLTSLWSLSVAIFSVGGM
IGSF SVGLFVNRFGRNSMLIVNLLAVTGGCFMGLCKVAKSVEMLILGRLVIGLFCGLCTGFVPMYIGEISPTAL
RGAFGTNLNQLGIVVGILVAQIFGLEFILGSEELWPLLLGFTILPAILQSAALPFCPESPRFLLINRKEEENAKQI
LQRLWGTQDVSQDIQEMKDESARMSQEKQVTVLELFRVSSYRQPIIISIVLQLSQQLSGINAVFYYSTGIFKDAG
VQEPIYATIGAGVVNTIFTVVSFLVERAGRRTLHMI GLGGM AFCSTLMTVSLLLKDNYNGMSFVCIGAILVEVA
FFEIGPGPIPWFI VAELFSQGPRPAAMAVAGCSNWT SNFLVGLLFPSAAHYLGAYVFIIFTGFLITFLAFTFFKV
PETRGRTFEDITRAFEQAHGADRSGKDGVMEMNSIEPAKETTTNV

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FIGURE 222

GTGAAACACCCTCGGCTGGGAAGTCAGTTCGTTCTCTCCTCTCCTCTCTTCTTGTTTGAACATGGTGCGGACTAA
AGCAGACAGTGTTCCAGGCACTTACAGAAAAGTGGTGGCTGCTCGAGCCCCCAGAAAGGTGCTTGTTTCTTCCAC
CTCTGCCACTAATTCGACATCAGTTTCATCGAGGAAAGCTGAAAAATAAATATGCAGGAGGGAACCCCGTTTGCGT
GCGCCCAACTCCCAAGTGGCAAAAAGGAATTGGAGAATTCTTTAGGTTGTCCCCTAAAGATTCTGAAAAAGAGAA
TCAGATTCCTGAAGAGGCAGGAAGCAGTGGCTTAGGAAAAGCAAAGAGAGAAAGCATGTCCTTTGCAACCTGATCA
CACAAATGATGAAAAAGAATAGAACTTTCTCATTTCATCTTTGAATAACGTCTCCTTGTTTACCCTGGTATTCTAG
AATGTAAATTTACATAAATGTGTTTGTTCCAATTAGCTTTGTTGAACAGGCATTTAATTAAAAAATTTAGGTTTA
AATTTAGATGTTCAAAAGTAGTTGTGAAATTTGAGAATTTGTAAGACTAATTATGGTAACTTAGCTTAGTATTCA
ATATAATGCATTGTTTGGTTTCTTTTACCAAATTAAGTGTCTAGTTCTTGCTAAAATCAAGTCATTGCATTGTGT
TCTAATTACAAGTATGTTGTATTTGAGATTTGCTTAGATTGTTGTACTGCTGCCATTTTTATTGGTGTGTGATT
TTGGAATGGTGCCATATTGTCACCTCTTCTACTTGCTTTAAAAAGCAGAGTTAGATTTTTGCACATTAAAAAATT
CAGTATTAATT

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FIGURE 223

MVRTKADSVPGTYRKVVAARAPRKVLGSSTSATNSTSVSSRKAENKYAGGNPVCVRPTPKWQKGIGEFFRLSPKD
SEKENQIPEEAGSSGLGKAKRKACPLQPDHTNDEKE

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FIGURE 224A

CGGACGCGTGGGAACGAAGCCACCCATTACGGTATGATGATGTCAAACGTGATGCTGATGCTACAGTTACAGCCC
CTGCTGGCGCAGCCTCTCTGATTCTCTCTCCCTCTCCGCGTCCAGTGCTGGGCTTTTTTCAGACAAGTGCATCTCC
TAACCAGGTCACATTTAGCCGCGACCCACTCTCCGCCAGTCACCGGAGGCAGACCGCGGGAGGAGAGCTGAGGA
CAGCCGCGTGCCTTCGCCAGCAGCGGGGTGGGAGGAAGGACATTAAATACTGCAGAAGTCAAGACCCCCCAGG
TCGAACCCAGACCACGATGCGCGCCCCGGGCTGCGGGCGGCTGGTGCTGCCGCTGCTGCTCCTGGCCGCGGCAGC
CCTGGCCGAAGGCGACGCCAAGGGGCTCAAGGAGGGCGAGACCCCCGGCAATTTTCATGGAGGACGAGCAATGGCT
GTCGTCCATCTCGCAGTACAGCGGCAAGATCAAGCACTGGAACCGCTTCCGAGACGAAGTGGAGGATGACTATAT
CAAGAGCTGGGAGGACAATCAGCAAGGAGATGAAGCCCTGGATACCACCAAGGACCCCTGCCAGAAGGTGAAGTG
CAGCCGCCACAAGGTGTGATTGCCAGGGCTACCAGCGGGCCATGTGCATCAGTCGCAAGAAGCTGGAGCACAG
GATCAAGCAGCCGACCGTGAACTCCATGGAACAAAGACTCCATCTGCAAGCCCTGCCACATGGCCCAGCTTGC
CTCTGTCTGCGGCTCAGATGGCCACACTTACAGCTCTGTGTGTAAGCTGGAGCAACAGGCGTGCCTGAGCAGCAA
GCAGCTGGCGGTGCGATGCGAGGGCCCCCTGCCCCTGCCCCACGGAGCAGGCTGCCACCTCCACCGCCGATGGCAA
ACCAGAGACTTGCACCGGTGAGGACCTGGCTGACCTGGGAGATCGGCTGCGGGACTGGTTCCAGCTCCTTCATGA
GAACTCCAAGCAGAATGGCTCAGCCAGCAGTGTAGCCGGCCCCGGCCAGCGGGCTGGACAAGAGCCTGGGGGCCAG
CTGCAAGGACTCCATTGGCTGGATGTTCTCCAAGCTGGACACCAGTGCTGACCTCTTCTGGACCAGACGGAGCT
GGCCGCCATCAACCTGGACAAGTACGAGGTCTGCATCCGCTCCCTTCTTCAACTCCTGTGACACCTACAAGGATGG
CCGGGTCTCTACTGCTGAGTGGTGCTTCTGCTTCTGGAGGGAGAAGCCCCCTGCCTGGCAGAGCTGGAGCGCAT
CCAGATCCAGGAGGCCGCCAAGAAGAAGCCAGGCATCTTCATCCCGAGCTGCGACGAGGATGGCTACTACCGGAA
GATGCAGTGTGACCAGAGCAGCGGTGACTGCTGGTGTGTGGACCAGCTGGGCCTGGAGCTGACTGGCACGCGCAC
GCATGGGAGCCCCGACTGCGATGACATCGTGGGCTTCTCGGGGGACTTTGGAAGCGGTGTGCGCTGGGAGGATGA
GGAGGAGAAGGAGACGGAGGAAGCAGGCGAGGAGGCCGAGGAGGAGGCGAGGCAGGCGAGGCTGACGACGG
GGGCTACATCTGGTAGACGCCCTCAGAAGCCGGCTGCCGGGGGGGACTCAACAGCAGAGCTCTGAGCAGCAGCAG
GCAACTTCGAGAACGGATCCAGAAATGCAGTCAGAAGGACCCTGCTCCACCTGGGGGGACTGGGAGTGTGAGTGT
GCATGGCATGTGTGTGGCACAGATGGCTGGGACGGGTGACAGTGTGAGTGCATGTGTGCATGCATGTGTGTATGT
GTGTGTGTGTGTGGCATGCGCTGACAAATGTGTCTTGTATCCACACTGCTCCTGGCAGAGTGAGTAACCCAAAGG
CCCCCTTCGGCCTCCTTGTAGCTGTTTTCTTTCTTTTGTGTTGGTTTTTAAATACATTACACACAAATACAAA
TTGACAGGTCAAAATCCATGAAATGAGATCCCCAGCCGTGTCTCCAGCCCAGCCCTGACCCCTTGGTTTTCTAC
CCTGGCTCCCCCTTGGTTTTCTACCCTGGCTCAACCGACCCCTGTCTGCCCTTCTCCCTCCTGCTTCTGAGGTCAAG
CTCTGGCCTGCGAGCCTGTCCCCATTGCAAAGGGGAGGGAGGGGAGGGAGCTGTCTACCAGCTGAGGTCTCTCC
AAAAGTGGGCCGATGTGGTGTGACATCCCCACCAGCCTCAGATGAGACGGGCCAGGACGCCCAGCCACAGCAAGC
CCTGTCCCTTTGCCGGATCCCCAAACACTAGAGAAGCTCTCTAACCCAAGGCGGAGAATGAAGGTGGTGGCGGC
AGAGGAGGAGGGCAGCAGCTGAGAGGCCAGGGACAGGTGCCTCGCCAAGCTGTCTGAGGTCTGTCCAGGTGGC
CCAGGTGGTGCAGGTAGAACAGGTGAGGAGAGGGGGTGGCTCAACAGGAGGAGGCTGTGGCTGCAGAGCCTGG
AGGAGCTTTTAGGTGTTGAGATGGGGCAGCTCTGAATCCTAGACCCTGGAATAGCCTGTCCCTTTTCTCTGGGTC
TCGTGGTGGAGCCATGATCTGGGCTGCTCTCTTGGGGACACTGGGTGGTGGTTACACAGTTGACCTCTGCCTGGC
TCCCCCTTGGTGCAACTCCTGCCTCCATCCCCCTTGTGGGGTCCCCCTCATCCACTTGAGGGCGCCTGAGGGCCA
GGAGCAGCAGGCAAGGAGCCTGGGTCTAGGCTAAGGGGGTGTGTGCCACCTCCTCCCTGACCCCTTAACACTCCT
GTCTTGGCCAGACCAACAGAGAGAGCTGTCCCTGAGACCCCGAGAGAAGCAGCTGCCGAAAGCTGCAGCCTTTC
CGCACTCTGAGACCATGATCTTCTCTGCCAGGGGAGAGCCACCCACAGGCCATGTCCAGCCCCACTTCCCTCA
GCCCCAGGGCTTCTTCTGGCCCCCTCTGAGGATTCCCTAGGGCTGCCCGCAGAGGGGCTTCCCCAAGCTCTGT
TTTGAAGCCTGCAATGTGGAAGAGTGAGAAGTCAGAGGGAACAGGACAGGTGCAGCCGGGCTCTGAGGCCACACC
TCACACCTCGCTGTTCCCCAACATCCCCCTGAGCAGTGTGAGCTCATCTACCAGATGAGAAGAGGCCCTGTGCAT
TTCTTTTGTGTTGTTGTTGCTGTTTTCCCCCACCCATCCAGTTCTCCTCAGCAAAGCAAATTCCTTAACACCTTT
GGTGGAGAATTTCTTACCCAGACTTGGGGCTGTGATGCCCTTCAGTGCGTGGTGAGTGCAGCGTGTGTGCGTGTG
CCTGTGTGTGAACCTGGGGGCCATCCTGGTGGCCTGGGAGCGTGAGGAGAGGCCCCCTGTGTGCTGGGTGAGTGG
TGGGTGTGGGTCAATGCAGTGAGGCTCTCTGGGTGAGGCTCCCAACCTGGCAGTCCCCAGCCTCCAGCATCTG
TGAGCGTCTGTTGGACTTTACAGAAGAGCCTCATCCGCTGCCCCCTCACTCTGCCCTGGAATCAACATCTTCCG
AGTCCTTCTTGGGGGAAATAGCAGAGCCCCACTTAACCTCATAAACTGCTTCCCATTCCGCAGCCCAGTTCTGAT

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FIGURE 224B

TGTTGAGGTGTCGCGTCGTTCCAGGTCCCCAGTCCCCTCTTTCTCCTGTCCTCTCTCTGTCCTTCACCTCCCCA
CTCCAGCCCCGGCTCAGTTCAGGGAAATGCTGTTCCATATCAGCCCTCTGCTCTCTGAGGCAGCCGCGCCTCTGA
CTCGGAGCTACTTGAAACTTCTGCTCTTGCTAGGATTGGAGTCTACCTATCTCTTCCATTTGTCCTCAGCTGGAGT
TCTGGAACCTTTCTCCTCGGGGTGGGGGTGGGGGTTGTTAAGGATGCTGGGGGGCCTGGGGAAGGAAGGAGTTCA
GAGGAAGGGTGTCCCCCTGTCTCTTGATGTCACCCCTCCGCTCCTGGGACACGTGCTCTCTCTGTCTCTGGGTCTT
CTGGCTGTGCACGTTTGTGTGCTCTGTAAATATGTTTTAGGAAGAAAGCAAAAGGGACTGAACTAGCCTCTGGT
AGGATTGCAGGGGTCCAGCCTTGCTGTTCGGAAGCCCCACACTGCCTTTCGCCCCACTGAGACTGGTCCCCCT
CAAAAGGTAGACAAAACAGCAGCTCCCTGTGGAGCTGAAGGGCGGCCTCAAAGTGGCTTTTTGTTAGACAAGGTT
AAGGTTTCCTCATGAGCAAGGTTGCAGATCGGTCTTCTCAGCTCCTTGATTTGTGACCTTGACCAAGGGGCCT
GCCACCCAGCCCCCTCAGTGCCTCTCTCGATGCCTCGCTCCTTCTGCCCCACTCCCCTGGCTTAGGCAGGT
AGGGGAATTAGGGCCATGCTGGAAGAAGCTTAACCATGTGTTCAAAGAACGGTTTCTTGCTTGCTTGGTCCTGGA
ACTCCCCTTGCTGCCCCAGGCCTCCTTGCCCCATGGGTGCTGGGGGAGGTGGATGTCAGATCTGGTAGGTTGCA
GCAGAGAAAATAAATGTGCCTTGAGAGACCACTCAGAGAGGGTCCAAGGGTGATGGAGAAGGAAGCATGGCCTGG
GAGCTTGGAAGGGAGGGGTGGTGGGTGGCGGCATCTTGAAGTCCCCCTGTTGTCCACACGTGGGGGGTGGTCAC
CCCCCTTCACTCCAGCCCGCCTGCCTTCAGCCTTCCATGAGCTTACCTGCTTCCAACCTCACTTTGGAGGGGGT
GGGGTCCGTTGGCATCAACACGGGGACCCCTCTGCTTACCAAAGCCGAGCCCTCAGCCCCTGGGGAGAACAAT
GGCTGAGCTTTGATACCTGGGGTCGTGAGAGGCTGCGGGCTGGCGGCAGTCCCAGGGGAGAGACACCACAGAAG
GAGACCCAGACATCCCGAGGAAGTTCCCAGCAGAGCAAAGTCTTCCAGCCTGAAGCCTGCTTAACTGTGTGA
TGTGCAATAACTGAGCTTAGAGTTAGGAATTGTGTTCAAGTGTGTTGGATTTCGTCGTAGATTAACTGCTGAA
ATTGTAICTCTCAGTAATTTTAGATGTCTTTTAAAAAATTGAAAAACAAAGTGTAGACTGTGTGCGTGTGCGTT
GATGGGCACTCAAGAGTCCCGTGAGTCATCCAGCCCTGCCTTTCCCTGCGCCCCCATCCTCTCACGTCCCGCCC
TGCTTCCACTTGGGGACCCCTGCCTCGTGTGCTCTTTATCTGCCTATTACTCAGCCTAAGGAAACAAGTACACTCC
ACACATGCATAAAGGAAATCAAATGTTATTTTTAAGAAAATGGAAAATAAAAACTTTATAAACACC

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FIGURE 225

MRAPGCCGRLVLPLLLLAAAALAEGDAKGLKEGETPGNFMEDQWLSSISQYSGKIKHWNFRDEVEDDYIKSWED
NQQGDEALDTTKDPCQKVKCSRHKVCIAQGYQRAMCISRKKLEHRIKQPTVKLHGKNKDSICKPCHMAQLASVCGS
DGHTYSSVCKLEQQACLSSKQLAVRCEGPCPCPTEQAATSTADGKPETCTGQDLADLGDRLRDWFQLLHENSQN
GSASSVAGPASGLDKSLGASCKDSIGWMFSKLDTSADLFLDQTELAALNLDKYEVCIRPFFNSCDTYKDGRVSTA
EWCFCFWREKPPCLAELERIQIQEAAKKKPGIFIPSCDEDEGYRKMQCDQSSGDCWCVDQLGLELTGTRTHGSPD
CDDIVGFSGDFGSGVGWEDEEEKETEEAGEEAEEEGEAGEADDGGYIW

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FIGURE 226A

TTCCGGTGGCCTCTAGTGAGATCTGGAGGATCCAAGGATTCTGTAGCTACAATGTTGTCAAGACTTTTTTCGAATGC
ATGGCCTCTTTGTGGCCTCCCATCCCTGGGAAGTCATAGTGGGGACAGTGACACTGACCATCTGCATGATGTCCA
TGAACATGTTTACTGGTAACAATAAGATCTGTGGTTGGAATTATGAATGTCCAAAGTTTGAAGAGGATGTTTGA
GCAGTGACATTATAATTCTGACAATAACACGATGCATAGCCATCCTGTATATTTACTTCCAGTTCCAGAATTTAC
GTCAACTTGGATCAAAATATATTTTGGGTATTGCTGGCCTTTTCACAATTTTCTCAAGTTTTGTATTCAGTACAG
TTGTCATTCACTTCTTAGACAAAGAATTGACAGGCTTGAATGAAGCTTTGCCCTTTTCTACTTTTGATTGACC
TTTCCAGAGCAAGCACATTAGCAAAGTTTGCCCTCAGTTCCAACCTCACAGGATGAAGTAAGGGAAAATATTGCTC
GTGGAATGGCAATTTTAGGTCTACGTTTACCCTCGATGCTCTTGTGTAATGCTTGTGATTGGAGTTGGTACCA
TGTCAGGGGTACGTGAGCTTGAATTATGTGCTGCTTTGGCTGCATGTCAGTTCTTGCCAACTACTTCGTGTTCA
TGACTTTCTTCCAGCTTGTGTGCTCTTGGTATTAGAGCTTTCTCGGGAAAGCCGCGAGGGTTCGTCCAATTTGGC
AGCTCAGCCATTTTGCCCGAGTTTTAGAAGAAGAAAATAAGCCGAATCCTGTAACCTCAGAGGGTCAAGATGA
TTATGCTCTAGGCTTGGTTCTTGTTCATGCTCACAGTCGCTGGATAGCTGATCCTTCTCCTCAAAACAGTACAG
CAGATACTTCTAAGTTTTATTAGGACTGGATGAAAATGTGTCCAAGAGAATTGAACCAAGTGTTCCTCTGGC
AGTTTTATCTCTCTAAATGATCAGCATGGATATTGAACAAGTTATTACCCTAAGTTTAGCTCTCCTTCTGGCTG
TCAAGTACATCTTCTTTGAACAAACAGAGACAGAATCTACACTCTCATTAAAAAACCTATCACATCTCCTGTAG
TGACACAAAAGAAAGTCCCAGACAATTGTTGTAGACGTGAACCTATGCTGGTCAGAAATAACCAGAAATGTGATT
CAGTAGAGGAAGAGACAGGGATAAACCGAGAAAGAAAAGTTGAGGTTATAAAACCCTTAGTGGCTGAAACAGATA
CCCCAAACAGAGCTACATTTGTGGTTGGTAACTCCTCCTTACTCGATACTTCATCAGTACTGGTGACACAGGAAC
CTGAAATTGAACTTCCCAGGGAACCTCGGCCTAATGAAGAATGTCTACAGATACTTGGGAATGCAGAGAAAGGTG
CAAAATTCCTTAGTGATGCTGAGATCATCCAGTTAGTCAATGCTAAGCATATCCCAGCCTACAAGTTGGAACTC
TGATGGAACTCATGAGCGTGGTGTATCTATTTCGCCGACAGTTACTTTCCAAGAAGCTTTCAGAACCTTCTTCTC
TCCAGTACCTACCTTACAGGGATTATAATTACTCCTTGGTGATGGGAGCTTGTGTGAGAATGTTATTGGATATA
TGCCCATCCCTGTTGGAGTGGCAGGACCCCTTTGCTTAGATGAAAAAGAATTTTCAGGTTCCAATGGCAACAACAG
AAGGTTGTCTTGTGGCCAGCACCAATAGAGGCTGCAGAGCAATAGGTCTTGGTGGAGGTGCCAGCAGCCGAGTCC
TTGCAGATGGGATGACTCGTGGCCAGTTGTGCGTCTTCCACGTGCTTGTGACTCTGCAGAAGTGAAAGCCTGGC
TCGAAACATCTGAAGGGTTTCGCAGTGATAAAGGAGGCATTTGACAGCACTAGCAGATTTGCACGTCTACAGAAAC
TTCATACAAGTATAGCTGGACGCAACCTTTATATCCGTTTCCAGTCCAGGTCAGGGGATGCCATGGGGATGAACA
TGATTTCAAAGGGTACAGAGAAAGCACTTTCAAACCTTACAGAGTATTTCCCTGAAATGCAGATTCTAGCCGTTA
GTGGTAACTATTGTACTGACAAGAAACCTGCTGCTATAAATTGGATAGAGGGAAGAGGAAAATCTGTTGTTTGTG
AAGCTGTCAATCCAGCCAAGGTTGTGAGAGAAGTATTAAAGACTACCACAGAGGCTATGATTGAGGTCAACATTA
ACAAGAATTTAGTGGGCTCTGCCATGGCTGGGAGCATAGGAGGCTACAACGCCCATGCAGCAAAACATTGTACCCG
CCATCTACATTGCCTGTGGACAGGATGCAGCACAGAATGTTGGTAGTTCAAACCTGTATTACTTTAATGGAAGCAA
GTGGTCCCACAAATGAAGATTTATATATCAGCTGCACCATGCCATCTATAGAGATAGGAACGGTGGGTGGTGGGA
CCAACCTACTACCTCAGCAAGCCTGTTTGCAGATGCTAGGTGTTCAAGGAGCATGCAAAGATAATCCTGGGGAAA
ATGCCCGGCAGCTTGCCCGAATTGTGTGTGGGACCGTAATGGCTGGGGAATTGTCATTATGGCAGCATTGGCAG
CAGGACATCTTGTCAAAGTCAATGATTACACAACAGGTCGAAGATCAATTTACAAGACCTCCAAGGAGCTTGCA
CCAAGAAGACAGCCTGAATAGCCCCGACAGTTCTGAACTGGAACATGGGCATTGGGTTCTAAAGGACTAACATAAA
ATCTGTGAATTAAAAAGCTCAATGCATTGTCTTGTGGAGGATGAATAAATGTGATCACTGAGACAGCCACTTGG
TTTTTGGCTCTTTCAGAGAGGTCTCAGGTTCTTTCCATGCAGACTCCTCAGATCTGAACACAGTTTAGTGCTTTA
CATGCTGTGCTCTTTGAAGAGATTTCAACAAGAATATTGTATGTTAAAGCATCAGAGATGGTAATCTACAGCTCA
CCTCTGAAAGCAAATATAAGCTGGGAAAAAAGTTTTGATGAAATTCTTGAAGTTTATGGTGATCAGTGCAATTGA
CCTTCTCCCTCACTCCTGCCAGTTGAAAATGGATTTTTAAATTATACTGTAGCTGATGAACTCCTGATTTTGTA
GTTAATTTATTAAGTCTGGGATGTAGAAGTTCAAGAAGTAAGAGCTAAGTTCTAAGTTTATGTTTGTAAATTAAT
ACTTCATTGTTGGTCTGGTCTATTTTGATTTTGGGGGTAATCAGCATTATTCTTTCAGAAGGGGACCTGTTTCTT
CAAGGGAAGAAACACTCTTATTTCCAACTACAGAATAATGTGTTAAACATGCTAAATAGTTCTATCAGGAAAAC
AAATCACTGTATTTATCTCCGAGGCTATTTGTTTCAGAGAGGCTTTTGTAAATATAAATGTTTAAATATAAA
TGTTTGTCTGGATTGGCTATAACATGTCTTTCAGCATTAGGCTTTTAAGAAACACAGGGTTTTGTATTCTTTACT
AAAGATATCAGAGCTCTTAATGTTGCTTAGATGAGGGTGACTGTCAAGTACAAGCAAGACTGGGACCTTAGAAAT

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FIGURE 226B

CATTGTAGAAACACAGTTTTGAAAGATTTTTACCATGTCTCTAAGCCAACTTTAATTGCTTAAAAGACATTTTTA
TTTAGTTGAAAAATCTAGTTTTTTTTGTAAACTGTACCAAATCTGTATATGTTGTAATAAACTTATGCTAGTTT
ATTGGAAGTGTTCAAGAAATAAAAAATCAACTTGTGTACTGATAAAATACTCTAGCCTGGGCCAGAGAAGATAATG
TTCTTTAATGTTGTCAGGAAACCCTGGCTTGCTTGCCGAGCCTAATGAAAGGGAAAGTCAGCTTTCAGAGCCAGT
GAAGGAGCCACGTGAATGGCCCTAGAACTGTGCCTAGTTCCTGTGGCCAGGAGGTTGGTGACTGAAACATTCACA
CAGGGCTCTTGATGGACCCACGAACGCTCTTAGCTTTCTCAGGGGGTCAGCAGAGTTATTGAATCTTAATTTTT
TTTAATGTACAAGTTTTGTATAAATAATAAAGAACTCCTTATTTTGTATTACATCTAATGCTTAAGTGTTGCTCT
TGGAAGCTGATGATGTCTCTTGTAAGATGACTCTGAAAAACATTCCAGGAAACCATGGCAGCATGGAGAGCCT
CTTAGTGATTGTGTCTGCATTGTTATTGTGGAAGATTTACCTTTTCTGTTGTACGTAAAGCTTAAATTACTTTTG
TTGTGACTTTTTAGCCAGTGACTTTTTCTGAGCTTTTCATGGAAGTGGCAGTGAAAAATATGTTGAGTGTTCAA
AAAGTGACTGTAATTAATATCTTGCTGGATTAATGTTTTGTACAATTACTAAATTGTATACATTTTGTATAGAA
TACTTTTTTCTAGTTTCAGTAAATAATGAAAAGGAAGTTAATACCA

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FIGURE 227

MLSRLFRMHGLFVASHPWEVIVGTVTLTICMMSNMFTGNNKICGWNIECPKFEEVDLSSDIIILTITRCIAILY
IYFQFQNLRLGSKYILGIAGLFTIFSSVFVSTVVIHFIDKELTGLNEALPFFLLLDLSRASTLAKFALSSNSQ
DEVRENIARGMAILGPTFTLDALVECLVIGVGTMMSGVRQLEIMCCFGCMSVLANYFVFMFFPACVSLVLELSRE
SREGRPWQLSHFARVLEEEENKPNPVTQRVKMIMSLGLVLVHAHSRWIADPSPQNSTADTSKVSGLDENVSKR
IEPSVSLWQFYLSKMISMDIEQVITLSLALLLAVKYIFFEQTETESTLSLKNPITSPVVTQKKVPDNCRRPML
VRNNQKCDSEEEETGINRERKVEVIKPLVAETDTPNRATFVVGNSSLDTSSVLVTQEPEIELPREPRPNEECLQ
ILGNAEKGAFLSDAEIIQLVNAKHIPAYKLETLMETHERGVSIRRQLLSKKLSEPSLQYLPYRDYNYSLVMG
CCENVIGYMPIPVGVAGPLCLDEKEFQVPMATTEGCLVASTNRGCRAIGLGGGASSRVLADGMTRGPVVRP
DSAEVKAWLETSEGFVAVIKEAFDSTSRFARLQKLHTSIAGRNLRIRFQSRSGDAMGMNMISKGTEKALSKLHEYF
PEMQILAVSGNYCTDKKPAAINWIEGRGKSVVCEAVIPAKVVREVLKTTTEAMIEVNINKNLVGSAMAGS
IGGYN
AHAANIVTAIYIACGQDAAQNVGSSNCITLMEASGPTNEDLYISCTMPSIEIGTVGGGTNLLPQQACLQMLGVQ
G
ACKDNPGENARQLARIVCGTVMAGELSLMAALAAGHLVKSHMIHNRSKINLQDLQGACTKKTA

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FIGURE 228A

TTCGGTGGCCTCTAGTGAGATCTGGAGGATCCAAGGATTCTGTAGCTACAATGTTGTCAAGACTTTTTTCGAATGC
ATGGCCTCTTTGTGGCCTCCCATCCCTGGGAAGTCATAGTGGGGACAGTGACACTGACCATCTGCATGATGTCCA
TGAACATGTTTACTGGTAACAATAAGATCTGTGGTTGGAATTATGAATGTCCAAAGTTTGAAGAGGATGTTTTGA
GCAGTGACATTATAATTCTGACAATAACACGATGCATAGCCATCCTGTATATTTACTTCCAGTTCCAGAATTTAC
GTCAACTTGGATCAAAAATATATTTTGGGTATTGCTGGCCTTTTACAAATTTTCTCAAGTTTTGTATTTCAGTACAG
TTGTCAATTCATTCTTAGACAAAAGAATTGACAGGCTTGAATGAAGCTTTGCCCTTTTCTACTTTTGATTGACC
TTTCCAGAGCAAGCACATTAGCAAAGTTTGCCCTCAGTTCCAACTCACAGGATGAAGTAAGGGAAAATATTGCTC
GTGGAATGGCAATTTTAGGTCTTACGTTTACCCTCGATGCTCTTGTTGAATGTCTTGTGATTGGAGTTGGTACCA
TGTCAGGGGTACGTCAGCTTGAAATTATGTGCTGCTTTGGCTGCATGTCAGTTCTTGCCAACTACTTCGTGTTCA
TGACTTTCTTCCCAGCTTGTTGTGCTTGGTATTAGAGCTTTCTCGGGAAAGCCGCGAGGGTCTGCCAATTTGGC
AGCTCAGCCATTTGCCCGAGTTTGAAGAAGAAGAAAATAAGCCGAATCCTGTAACCTCAGAGGGTCAAGATGA
TTATGTCTCTAGGCTTGGTTCTTGTTCATGCTCACAGTCGCTGGATAGCTGATCCTTCTCCTCAAAACAGTACAG
CAGATACTTCTAAGGTTTCATTAGGACTGGATGAAAATGTGTCCAAGAGAATTGAACCAAGTGTTCCTCTGGC
AGTTTTATCTCTCTAAAATGATCAGCATGGATATTGAACAAGTTATTACCCTAAGTTTAGCTCTCCTTCTGGCTG
TCAAGTACATCTTCTTGAACAAACAGAGACAGAATCTACACTCTCATTAAAAAACCCATACATCTCCTGTAG
TGACACAAAAGAAAGTCCCAGACAATTGTTGTAGACGTGAACCTATGCTGGTCAGAAATAACCAGAAATGTGATT
CAGTAGAGGAAGAGACAGGGATAAACCAGAGAAAGAAAGTTGAGGTTATAAAACCCCTTAGTGGCTGAAACAGATA
CCCCAAACAGAGCTACATTTGTGGTTGGTAACTCCTCCTTACTCGATACTTCATCAGTACTGGTGACACAGGAAC
CTGAAATTGAACTTCCCAGGGAACCTCGGCCTAATGAAGAATGTCTACAGATACTTGGGAATGCAGAGAAAGGTG
CAAAATTCCTTAGTGATGCTGAGATCATCCAGTTAGTCAATGCTAAGCATATCCCAGCCTACAAGTTGGAACTC
TGATGGAAACTCATGAGCGTGGTGTATCTATTGCGCCGACAGTTACTTTCCAAGAAGCTTTCAGAACCTTCTTCTC
TCCAGTACCTACCTTACAGGGATTATAATTACTCCTTGGTGATGGGAGCTTGTGTGAGAATGTTATTGGATATA
TGCCCCATCCCTGTTGGAGTGGCAGGACCCCTTTGCTTAGATGAAAAAGAATTCAGGTTCCAATGGCAACAACAG
AAGGTTGTCTTGTGGCCAGCACCAATAGAGGCTGCAGAGCAATAGGTCTTGGTGGAGGTGCCAGCAGCCGAGTCC
TTGCAGATGGGATGACTCGTGGCCAGTTGTGCGTCTTCCACGTGCTTGTGACTCTGCAGAAGTGAAAGCCTGGC
TCGAAACATCTGAAGGGTTCGCAGTGATAAAGGAGGCATTTGACAGCACTAGCAGATTTGCACGTCTACAGAAAC
TTCATACAAGTATAGCTGGACGCAACCTTTATATCCGTTTCCAGTCCAGGTCAGGGGATGCCATGGGGATGAACA
TGATTTCAAAGGTACAGAGAAAGCACTTTCAAACCTTCACGAGTATTTCCCTGAAATGCAGATTCTAGCCGTTA
GTGGTAACCTATTGTACTGACAAGAAACCTGCTGCTATAAATTGGATAGAGGGAAGAGGAAAATCTGTTGTTTGTG
AAGCTGTCAATCCAGCCAAGGTTGTGAGAGAAGTATTAAAGACTACCACAGAGGCTATGATTGAGGTCAACATTA
ACAAGAATTTAGTGGGCTCTGCCATGGCTGGGAGCATAGGAGGCTACAACGCCCATGCAGCAAAACATTGTCACCG
CCATCTACATTGCCTGTGGACAGGATGCAGCACAGAATGTTGGTAGTTCAAACGTATTACTTTAATGGAAGCAA
GTGGTCCCAAAAATGAAGATTTATATATCAGCTGCACCATGCCATCTATAGAGATAGGAACGGTGGGTGGTGGGA
CCAACCTACTACCTCAGCAAGCCTGTTTGCAGATGCTAGGTGTTCAAGGAGCATGCAAAGATAATCCTGGGGAAA
ATGCCCGGCAGCTTGCCCGAATTGTGTGTGGGACCGTAATGGCTGGGGAATTGTCACTTATGGCAGCATTGGCAG
CAGGACATCTTGTCAAAAGTCACATGATTACAAACAGGTGGAAGATCAATTTACAAGACCTCCAAGGAGCTTGCA
CCAAGAAGACAGCCTGAATAGCCCCGACAGTTCTGAACTGGAACATGGGCATTGGGTTCTAAAGGACTAACATAAA
ATCTGTGAATTAAAAAGCTCAATGCATTGTCTTGTGGAGGATGAATAAATGTGATCACTGAGACAGCCACTTGG
TTTTTGGCTCTTTCAGAGAGGTCTCAGGTTCTTTCCATGCAGACTCCTCAGATCTGAACACAGTTTAGTGCTTTA
CATGCTGTGCTCTTTGAAGAGATTTCAACAAGAATATTGTATGTTAAAGCATCAGAGATGGTAATCTACAGCTCA
CCTCTGAAAGCAAATATAAGCTGGGAAAAAAGTTTTGATGAAATCTTGAAGTTCATGGTGATCAGTGCAATTGA
CCTTCTCCCTCACTCCTGCCAGTTGAAAATGGATTTTTAAATTATACTGTAGCTGATGAACTCCTGATTTTGTG
GTTAATTTATTAAGTCTGGGATGTAGAACTTCAAGAAGTAAGAGCTAAGTTCTAAGTTCATGTTTGTAAATTAAT
ACTTCATTTGGTGCTGGTCTATTTTGATTTTGGGGGTAATCAGCATTATTTCTCAGAAGGGGACCTGTTTTCTT
CAAGGGAAGAAACACTCTTATTTCCAAACTACAGAATAATGTGTTAAACATGCTAAATAGTTCTATCAGGAAAAC
AAATCACTGTATTTATCTCCGAGGCTATTTGTTTCAGAGAGGCCCTTTGTTTAAATATAAATGTTTAAATATAAA
TGTTTGTCTGGATTGGCTATAACATGTCTTTTCAGATTAGGCTTTTAAAGAAACACAGGGTTTTGTATTCTTTACT
AAAGATATCAGAGCTCTAATGTTGCTTAGATGAGGGTGACTGTCAAGTACAAGCAAGACTGGGACCTTAGAAAT

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FIGURE 228B

CATTGTAGAAACACAGTTTTGAAAGATTTTTACCATGTCTCTAAGCCAACTTTAATTGCTTAAAAGACATTTTTTA
TTTAGTTGAAAAATCTAGTTTTTTTTGTAAACTGTACCAAATCTGTATATGTTGTAATAAACTTATGCTAGTTT
ATTGGAAGTGTTCAAGAAATAAAAAATCAACTTGTGTACTGATAAAATACTCTAGCCTGGGCCAGAGAAGATAATG
TTCTTTAATGTTGTCAGGAAACCCCTGGCTTGCTTGCCGAGCCTAATGAAAGGGAAAGTCAGCTTTCAGAGCCAGT
GAAGGAGCCACGTGAATGGCCCTAGAACTGTGCCTAGTTCCTGTGGCCAGGAGGTTGGTGACTGAAACATTCACA
CAGGGCTCTTGATGGACCCACGAACGCTCTTAGCTTTCTCAGGGGGTCAGCAGAGTTATTGAATCTTAATTTTT
TTTAATGTACAAGTTTTGTATAAATAATAAAGAACTCCTTATTTTGTATTACATCTAATGCTTAAGTGTTGCTCT
TGAAAGCTGATGATGTCTCTTGTAGAGATGACTCTGAAAAACATTCCAGGAAACCATGGCAGCATGGAGAGCCT
CTTAGTGATTGTGTCTGCATTGTTATTGTGGAAGATTTACCTTTTCTGTTGTACGTAAAGCTTAAATTACTTTTG
TTGTGACTTTTTAGCCAGTGACTTTTTCTGAGCTTTTCATGGAAGTGGCAGTGAAAAATATGTTGAGTGTTCAA
AAAGTGACTGTAATTAATATCTTGCTGGATTAATGTTTTGTACAATTACTAAATTGTATACATTTTGTATAGAA
TACTTTTTTCTAGTTTCAGTAAATAATGAAAAGGAAGTTAATACCA

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FIGURE 229

MLSR LFRMHGLFVASHPWEVIVGTVTLTICMMSNMFTGNKICGWNYECPKFEEEDVLSSDIIILTITRCIAILY
IYFQFQNLRLGSKYILGIAGLFTIFSSFVFSTVVIHFLDKELTGLNEALPFFLLLIDLSRASTLAKFALSSNSQ
DEVRENIARGMAILGPTFTLDALVECLVIGVGTMSGVRQLEIMCCFGCMSVLANYFVFMTFFPACVSLVLELSRE
SREGRPIWQLSHFARVLEEEENKPNPVTQRVKMIMSLGLVLVHAHSRWIADPSPQNSTADTSKVS LGLDENVSKR
IEPSVSLWQFYLSKMISMDIEQVITLSLALLLAVKYIFFEQTETESTLSLKNPITSPVVTQKKVPDNCCRREPML
VRNNQKCD SVEEETGINRERKVEVIKPLVAETDTPNRATFVVGNSSLLDTSSVLVTQEPEIELPREPRPNEECLQ
ILGNAEKGAKFLSDAEIIQLVNAKHIPAYKLETLMETHERGVSIRRQLLSKKLSEPSSLQYLPYRDYNYSLVMGA
CCENVIGYMPIPVGVAGPLCLDEKEFQVPMATTEGCLVASTNRCRAIGLGGGASSRVLADGMTRGPFVVR LPRAC
DSAEVKAWLETSEGF AVIKEAFDSTSRFARLQKLHTSIAGRNLYIRFQSRSGDAMGMNMISKGTEKALSKLHEYF
PEMQILAVSGNYCTDKKPAAINWIEGRGKSVCEAVIPAKVVREVLKTTTEAMIEVNINKNLVGSAMAGSIGGYN
AHAANIVTAIYIACGQDAAQNVGSSNCITLMEASGPTNEDLYISCTMPSIEIGTVGGGTNLLPQQACLQMLGVQG
ACKDNPGENARQLARIVCGTVMAGELSLMAALAAGHLVKSHMIHNRSKINLQDLQGACTKKTA

FIGURE 230

GGCACGAGGAAGATATATGGATACAGATTATATATATATATACATATTTTCCTTAATAGAGGAATGCTTCATATT
ATTCAAAAATTATATCCTGATCACCTTTTTTTGTTTTTTATTGTAAAGTATCTCTGCTTTATCCATTGCTGAATT
CGATAGGATGTTGAAATGCTGGTCACCAAAAAAGGAACTGAGCAAATTCATTTCAACAACATCAAACTTCAGC
TTCTCATAGTAAAAAGCTGAATGTTACTAATATTTTTCATATCTAAAAAAAATTCTTAGCAATGAAATTGCTGT
TAAACACAAATTTCAATCAAATACTTTTGTGTATAGAAAATATGTATAGTAGGTAGATAGAAAAGTATAAAATG
TTTGTGTGAAGTATCTTATTTTAGAATGAATGGAGAAATGCCAAAGATGAATCC TTCCTCACTGCATTATGAAAATATT
TCACATGTTCTCTTGGACTTTATATAAAATCTGTAATAGATTTTAGAATTGAAAAATTCCTTTGTGAAGGTCTTCTA
AAAGTGTTCCAATTTATCTCAAAAATCTCCAATATATAGGATCAGCTTAAACATAAAGAAAACCTTGAATTTCTCA
AATGTTTGAGATGTTCAAGACAGTCTCTTAATCCGTTAATGCTTTTGGAACAATTGACAAAATAGGGCAGGCAG
CTCATCTCATGTCTGAAGTTGGAATTTAAATAATTCCCTATTTGCAAATTAGAATGACAGTGTTGGAATTTGGAG
GCAGTAGTTGAGCATATTCTCTAGTATATAGCTACACCTTTAATAAAATGAAGGAATGTCTTCAATCATATTTTA
GTGGGCTATTTATAAATAGTCTTGAAGTCAATTTAGTTTATTTATTTAAAAGATAATGCATCCTGAAAGGGATCA
TTTATGAATAACAATCTGAAGTCTTTTCATAAAAAAATTAATAAACTTTAGTTGTACATTTAGCCAGTGTTATT
TGAAGTATGTAACCTTTTAAAAATATTAAGTGTCTTGTATGATTAGAATATGTGAATGAGTAACTTATTTTGTATCA
GGAATGTTTTGGTACTGTGTTTTCACTCAAACCACTGACTTAAACAGATACTGCTGTGTATAACATGTACTAAATA
TTACAGTTATTGTGCATAACAGATTGTTCCCTCTTATATTTGTGTGTATACAGGCAATTCATGTTTTAATGTAAT
AAATACCATTTTGCAGTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 231

GGGGGGGGGGGACCACTTGGCCTGCCTCCGTCCCGCCGCGCCACTTGGCCTGCCTCCGTCCCGCCGCGCCACTT
CGCCTGCCTCCGTCCCCCGCCGCGCGCC**ATG**CCTGTGGCCGGCTCGGAGCTGCCGCGCCGGCCCTTGCCCCC
GCCGCACAGGAGCGGGACGCCGAGCCGCGTCCGCCGCACGGGGAGCTGCAGTACCTGGGGCAGATCCAACACATC
CTCCGCTGCGGCGTCAGGAAGGACGACCGCACGGGCACCGGCACCCTGTCGGTATTTCGGCATGCAGGCGCGCTAC
AGCCTGAGAGATGAATTCCCTCTGCTGACAACCAACGTGTGTTCTGGAAGGGTGTTTTGGAGGAGTTGCTGTGG
TTTATCAAGGGATCCACAAATGCTAAAGAGCTGTCTTCCAAGGGAGTGAAAATCTGGGATGCCAATGGATCCCGA
GACTTTTTGGACAGCCTGGGATTCTCCACCAGAGAAGAAGGGGACTTGGGCCAGTTTATGGCTTCCAGTGGAGG
CATTTTGGGGCAGAATACAGAGATATGGAATCAGATTATTCAGGACAGGGAGTTGACCAACTGCAAAGAGTGATT
GACACCATCAAAACCAACCCTGACGACAGAAGAATCATCATGTGCGCTTGGAATCCAAGAGATCTTCCTCTGATG
GCGCTGCCCTCCATGCCATGCCCTCTGCCAGTTCTATGTGGTGAACAGTGAGCTGTCCTGCCAGCTGTACCAGAGA
TCGGGAGACATGGGCCTCGGTGTGCCTTTCAACATCGCCAGCTACGCCCTGCTCACGTACATGATTGCGCACATC
ACGGGCCTGAAGCCAGGTGACTTTATACACACTTTGGGAGATGCACATATTTACCTGAATCACATCGAGCCACTG
AAAATTCAGCTTCAGCGAGAACCCAGACCTTTCCCAAAGCTCAGGATTCTTCGAAAAGTTGAGAAAATTGATGAC
TTCAAAGCTGAAGACTTTCAGATTGAAGGGTACAATCCGCATCCAACATTATAAATGGAAATGGCTGTT**TAG**GGT
GCTTTCAAAGGAGCTTGAAGGATATTGTCAGTCTTTAGGGGTGGGCTGGATGCCGAGGTAAAAGTTCTTTTGC
TCTAAAAGAAAAAGGAAGTAGGTCAAAAATCTGTCCGTGACCTATCAGTTATTAATTTTTAAGGATGTTGCCACT
GGCAAATGTAAGTGTGCCAGTTCTTTCCATAATAAAAGGCTTTGAGTTAACTCACTGAGGGTATCTGACAATGCT
GAGGTTATGAACAAAGTGAGGAGAATGAAATGTATGTGCTCTTAGCAAAAACATGTATGTGCATTTCAATCCAC
GTAATTATAAGAAGGTTGGTGAATTTACAAGCTATTTTTGGAATATTTTTAGAATATTTAAGAATTTACAA
GCTATTCCTCAAATCTGAGGGAGCTGAGTAACACCATCGATCATGATGTAGAGTGTGGTTATGAACTTTATAGT
TGTTTTATATGTTGCTATAATAAGAAGTGTCTGC

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FIGURE 232

MPVAGSELPRRPLPPAAQERDAEPRPPHGELQYLGQIQHILRCGVRKDDRTGTGTLSVFGMQARYSLRDEFPLLT
TKRVFWKGVLEELLWFIKGSTNAKELSSKGVKIWDANGSRDFLDLGFSTREEDLGPVYGFQWRHFGAEYRDME
SDYSGQGVDQLQRVIDTIKTNPDDRIIMCAWNPRDLPLMALPPCHALCQFYVNSELSQLYQRSMDMGLGVPF
NIASYALLTYMIAHITGLKPGDFIHTLGDAHIYLNHIEPLKIQLQREPRPFPKLRILRKVEKIDDFKAEDFQIEG
YNPHPTIKMEMAV

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FIGURE 233

CTATCCGCGCGCGTCGCCGGCCAGTCCTGTCGCTGACGGGAGGATCTGAAGCCGGCCGCGAGGTCAAAGAGTAAA
ATGAAGTACATTCTGGTTACTGGTGGTGTATATCAGGAATTGGAAAAGGAATCATTGCCAGCAGTGTGGGCACA
ATACTCAAGTCATGTGGTTTTACATGTAACCTCAATCAAAATTGACCCCTACATTAACATTGATGCAGGAACATTC
TCTCCTTATGAGCATGGTGAGGTTTTTGTGCTGGATGATGGTGGGGAAAGTAGACCTTGACCTGGGTAACTATGAG
CGGTTCTTGACATCCGCCCTACCAAGGACAATAATCTGACCACTGGAAAAGATATACCAGTATGTCATTAAACAAG
GAACGGAAGGAGATTACTTGGGGAAAACCTGTCCAAGTTGTCCCTCATATCACAGATGCAATCCAGGAGTGGGTG
ATGAGACAGGCGTTAATACCTGTAGATGAAGATGGCCTGGAACCTCAAGTGTGTGTTATTGAGCTTGGTGGAAACC
GTGGGGGACATAGAAAGCATGCCCTTTATTGAGGCCCTTCCGTCAGTTCCAATTCAAGGTCAAAGAGAGAACCTTT
TGTAACATCCACGTCAGTCTAGTTCCCCAGCCAAGTTCAACAGGGGAACAGAAGACTAAACCTACCCAGAATAGT
GTTCCGGGAACCTTAGAGGACTTGGGCTTTCCCCAGATCTGGTTGTATGCAGGTGCTCAAATCCACTTGACACATCA
GTGAAGGAGAAAAATATCAATGTTCTGCCATGTTGAGCCTGAACAAGTGATCTGTGTCCACGATGTCTCATCCATC
TACCGAGTCCCCCTTGTGTTAGAGGAGCAAGGGGTTGTAGATTATTTCTTCGAAGACTTGACCTTCCTATTGAG
AGGCAGCCAAGAAAAATGCTGATGAAATGGAAAGAGATGGCTGACAGATATGATCGCTTGCTGGAGACCTGCTCT
ATTGCCCTTGTGGCGAAATACACCGAGTTCTCAGACTCCTATGCCTCTGTCATTAAAGGCTCTGGAGCATTCTGCA
CTGGCCATCAACCACAAATTGGAATCAAGTACATAGATTCTGCGGACTTGAGGCCATCACCTCGCAAGAAGAG
CCCGTGCGCTACCACGAAGCTTGGCAGAAGCTCTGTAGTGCTCATGGAGTGCTGGTTCCAGGAGGATTTGGTGTT
CGAGGAACAGAAGGAAAAATCCAAGCAATTGCCTGGGCTCGGAATCAGAAAAAGCCTTTTTTGGGCGTGTGCTTA
GGGATGCAGTTGGCAGTGGTTGAATTCTCAAGAAACGTGCTGGGATGGCAAGATGCCAATTCTACAGAGTTTGAC
CCTACGACCAGTCATCCCGTGGTCTGATACATGCCAGAACACAACCCAGGGCAGATGGGCGGAACCATGAGGCTG
GGCAAGAGGAGAACCCCTGTTCCAGACCAAGAACTCAGTCATGAGGAACTCTATGGAGACGCAGACTACTTGGA
GAGAGGCACCGCCACCGATTTGAGGTGAATCCAGTCTGGAAAAAGTGTGTTGGAAGAACAAGGCTTGAAGTTTGT
GGCCAAGATGTTGAAGGAGAGAGAATGGAAATTGTGGAGTTAGAAGATCATCCCTTTTTTGTGGGGTTTCAGTAC
CACCTGAGTTCCTGTCCAGGCCTATCAAGCCCTCCCCACCATACTTTGGCCTCCTCCTGGCCTCTGTGGGGCGG
CTCTCACATTACCTCCAGAAAGGCTGCAGGCTCTCACCCAGGGACACCTATAGTGACAGGAGTGGAAGCAGCTCC
CCTGACTCTGAAATCACCGAACTGAAGTTTCCATCAATAAATCATGACTTGATCTTGTAGCGGATGATTCTTCAAG
AGACCTTCAAACCTTGGGTAGAGTTTACAGCTCTGACTTTTACACTCGGCTTTGGAGACTTTCTTTAAATTATGTT
TTTATTAAGATTATTTTATTATGCGGAAAGGTATTTGGGAAACTTGTCACTTGTCATGTCCCATCACGTGTACTGG
CTCCTCTGTGGTGTCTGCCTGTTGCGTGACACTCTCCTTGCACTTCTTGAGTTGCGGCAGAACATCGCGATGGGA
ACCGATGGTGGGTGGGGCTGCAGATGTCCCATCGGTCACCTTGTCTCAACTACCTCGCATCATTGCAGATCG
TAGCGCGTTGCCTGTGCTTTCCCTTGGATACCTAGACCGTTATAAAGTGTGCCACATGGACTTACCGAGCATGG
AGAGAGGATTTTAGCTAGGATTTGAACACTTGGTGTGTTGGGAACTCAGGGTATTGCTTGCCACTAAGCCATGAAA
CCAGAGACAAAATCTCTATACTGCCCTGAGTTGGGGGAATTCTCAGTGCCAACTGTGGCTGGTCTCTATTCAA
GGGACGGTCAGTTTGGTGTCAACATGAAACACCAAGATGTCTGTCTCTGAAGCGTGATTTTAAATCCCATGCC
TGTGCGTGCGCTTCCATTTCTAGGGCTGGGAAACACTCCTTGTCATCAAGGGGTCACTTACAGAACAAGAATCT
TTTGGGGGAACTTCCCTCTAAACCCCTCTCATATATAGACAGCTTTGACTGGAGGGTCCATTTTCTTCCAGGAT
GGTGTACTGCAGTTGAAGGGCAATATGAAGTTACTTTCTTAATGTGACCTAGCAATAGGCATAGCTACGTGGCA
CTATATTCTGGCCAGACTCGATGTGTACTCTAACTTAAGAAATAAATCAGTAAGGCAG

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FIGURE 234

MKYILVTGGVISGIGKGIIASSVGTILKSCGLHVTSIKIDPYINIDAGTFSPYEHGEVFVDDGGGEVDLDLGNYE
RFLDIRLTKDNNLTGKIYQYVINKERKGDYLGKTVQVPHITDAIQEWVMRQALIPVDEDGLEPQVCVIELGGT
VGDIESMPFIEAFRQFQFKVKRENFCNIHVSLVPQPSSTGEQKTKPTQNSVRELRLGLSPDLVVCRCNSNPLDTS
VKEKISMFCHVEPEQVICVHDVSSIYRVPLLLLEEQGVVDYFLRRDLPIERQPRKMLMKWKEMADRYDRLLETCS
IALVAKYTEFSDSYASVIKALEHSALAINHKLEIKYIDSADLEPITSQEEPVRVYHEAWQKLCSAHGVLVPGGFGV
RGTEGKIQAIAWARNQKKPFLGVCLGMQLAVVEFSRNVLGWQDANSTEFDPITTSHPVVVDMPEHNPGQMGGTMRL
GKRRTLFQTKNSVMRKLYGDADYLEERHRHRFEVNPVWKKCLEEQGLKFVGQDVEGERMEIVELEDHPFFVGVOY
HPEFLSRPIKPSPPYFGLLLASVGRLSHYLQKGCRLSPRDTYSDRSGSSSPDSEITELKFPSINH

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FIGURE 235

GCGCCCCAGTCGACGCTGAGCTCCTCTGCTACTCAGAGTTGCAACCTCAGCCTCGCT**ATGG**CTCCAGCAGCCCC
CGGCCCCGCTGCCCCGCACTCCTGGTCCTGCTCGGGGCTCTGTTCCCAGGACCTGGCAATGCCAGACATCTGTG
TCCCCCTCAAAAGTCATCCTGCCCCGGGGAGGCTCCGTGCTGGTGACATGCAGCACCTCCTGTGACCAGCCCAAG
TTGTTGGGCATAGAGACCCCGTTGCCTAAAAAGGAGTTGCTCCTGCCTGGGAACAACCGGAAGGTGTATGAACTG
AGCAATGTGCAAGAAGATAGCCAACCAATGTGCTATTCAAACCTGCCCTGATGGGCAGTCAACAGCTAAAACCTTC
CTCACCGTGTACTGGACTCCAGAACGGGTGGAACCTGGCACCCCTCCCCCTCTTGGCAGCCAGTGGGCAAGAACCTT
ACCCTACGCTGCCAGGTGGAGGGTGGGGCACCCCGGGCCAACCTCACCGTGGTGCTGCTCCGTGGGGAGAAGGAG
CTGAAACGGGAGCCAGCTGTGGGGGAGCCCGCTGAGGTACAGACCAGGTGCTGGTGAGGAGAGATCACCATGGA
GCCAATTTCTCGTGCCGCACTGAACTGGACCTGCGGGCCCCAAGGGCTGGAGCTGTTTGAGAACACCTCGGCCCCC
TACCAGCTCCAGACCTTTGTCTGCCAGCGACTCCCCACAACCTTGTGAGCCCCGGGTCTAGAGGTGGACACG
CAGGGGACCGTGGTCTGTTCCCTGGACGGGCTGTTCCCACTCTCGGAGGCCAGGTCCACCTGGCACTGGGGGAC
CAGAGGTTGAACCCACAGTCACTATGGCAACGACTCCTTCTCGGCCAAGGCCTCAGTCAGTGTGACCGCAGAG
GACGAGGGCACCCAGCGGCTGACGTGTGAGTAATACTGGGGAACAGAGCCAGGAGACACTGCAGACAGTGACC
ATCTACAGCTTTCCGGCGCCCAACGTGATTCTGACGAAGCCAGAGGTCTCAGAAGGGACCGAGGTGACAGTGAAG
TGTGAGGGCCACCCTAGAGCCAAGGTGACGCTGAATGGGGTTCAGCCAGCCACTGGGCCCCGAGGGCCAGCTC
CTGCTGAAGGCCACCCAGAGGACAACGGGCGCAGCTTCTCCTGCTCTGCAACCCTGGAGGTGGCCGGCCAGCTT
ATACACAAGAACCAGACCCGGGAGCTTCGTGTCTGTATGGCCCCGACTGGACGAGAGGGATTGTCCGGGAAAC
TGGACGTGGCCAGAAAATTCCCAGCAGACTCCAATGTGCCAGGCTTGGGGGAACCCATTGCCCGAGCTCAAGTGT
CTAAAGGATGGCACTTTCCCACTGCCCATCGGGGAATCAGTGACTGTCACTCGAGATCTTGAGGGCACCTACCTC
TGTCGGGCCAGGAGCACTCAAGGGGAGGTACCCGCGAGGTGACCGTGAATGTGCTCTCCCCCGGTATGAGATT
GTCATCATCACTGTGGTAGCAGCCGACATATAATGGGCACTGCAGGCCCTCAGCACGTACCTCTATAACCGCCAG
CGGAAGATCAAGAAATACAGACTACAACAGGCCCAAAAAGGGACCCCCATGAAACCGAACACACAAGCCACGCCT
CCCT**TGA**ACCTATCCCGGGACAGGGCCTCTTCTCGGCCTTCCCATATTGGTGGCAGTGGTGCCCACTGAACAGA
GTGGAAGACATATGCCATGCAGCTACACCTACCGGCCCTGGGACGCCGGAGGACAGGGCATTGTCTCTCAGTCAGA
TACAACAGCATTTGGGGCCATGGTACCTGCACACCTAAAACACTAGGCCACGCATCTGATCTGTAGTCACATGAC
TAAGCCAAGAGGAAGGAGCAAGACTCAAGACATGATTGATGGATGTTAAAGTCTAGCCTGATGAGAGGGGAAGTG
GTGGGGGAGACATAGCCCCACCATGAGGACATACTGGGAAATACTGAAACTTGCTGCCTATTGGGTATGCTG
AGGCCCCAGACTTACAGAAGAAGTGGCCCTCCATAGACATGTGTAGCATCAAAACACAAAGGCCACACTTCCT
GACGGATGCCAGCTTGGGCACCTGCTGTCTACTGACCCCAACCCCTTGATGATATGTATTTATTCATTTGTTATTTT
ACCAGCTATTTATTGAGTGTCTTTTATGTAGGCTAAATGAACATAGGTCTCTGGCCTCACGGAGCTCCAGTCCA
TGTCACATTCAAGGTCACCAGGTACAGTTGTACAGGTTGTACACTGCAGGAGAGTGCCTGGCAAAAAGATCAAAT
GGGGCTGGGACTTCTCATTGGCCAACCTGCCTTTCCCCAGAAGGAGTGATTTTTCTATCGGCACAAAAGCACTAT
ATGGACTGGTAATGGTTCACAGGTTACAGAGATTACCCAGTGAGGCCTTATTCCTCCCTTCCCCCAAACTGACA
CCTTTGTTAGCCACCTCCCCACCCACATACATTTCTGCCAGTGTTTCAATGACACTCAGCGGTCTGTCTGGAC
ATGAGTGCCAGGGAATATGCCAAGCTATGCCTTGTCCTCTGTCTGTTGCATTTCACTGGGAGCTTGCACT
ATTGCAGCTCCAGTTTCTGCAGTGATCAGGGTCTGCAAGCAGTGGGGAAGGGGGCCAAGGTATTGGAGGACTC
CCTCCAGCTTTGGAAGGGTCATCCGCGTGTGTGTGTGTGTGTATGTGTAGACAAGCTCTCGCTCTGTACCCAG
GCTGGAGTGCAGTGGTGCAATCATGGTTCACTGCAGTCTTGACCTTTTGGGCTCAAGTGATCTCCACCTCAGC
CTCCTGAGTAGCTGGGACCATAGGCTCACAACACCACACCTGGCAAATTTGATTTTTTTTTTTTTTTTTCAGAGAC
GGGTCTCGCAACATTGCCAGACTTCCTTTGTGTTAGTTAATAAAGCTTTCTCAACTGCC

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FIGURE 236

MAPSSPRPALPALLVLLGALFPGPGNAQTSVSPSKVILPRGGSVLVTCSTSCDQPKLLGIETPLPKKELLPLGNN
RKVYELSNVQEDSQPMCYSNCPDGQSTAKTFLTVYWTPERVELAPLPSWQPVGKNLTLRCQVEGGAPRANLTVVL
LRGEKELKREPAVGEPAEVTTTTLVRRDHHGANFSCRTELDLRPQGLELFENTSAPYQLQTFVLPATPPQLVSPR
VLEVDTQGTVVCSLDGLFPVSEAQVHLALGDQRLNPTVTYGNDSFSAKASVSVTAEDEGTQRLTCAVILGNQSQE
TLQTVTIYSFPAPNVILTKPEVSEGTEVTVKCEAHPRAKVTLNGVPAQPLGPRAQLLLKATPEDNGRSFSCSATL
EVAGQLIHKNQTRELRVLYGPRLDERDCPGNWTWPENSQQTPMCQAWGNPLPELKCLKDGTFFPLPIGESVTVTRD
LEGTYLCRARSTQGEVTREVTNVLSPRYEIVIIITVAAAVIMGTAGLSTYLYNRQRKIKKYRLQQAQKGTPMKP
NTQATPP

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FIGURE 237

GCGCCCCAGTCGACGCTGAGCTCCTCTGCTACTCAGAGTTGCAACCTCAGCCTCGCTATGGCTCCCAGCAGCCCC
CGGCCCCGCGCTGCCCCGACTCCTGGTCCTGCTCGGGGCTCTGTTCCAGGACCTGGCAATGCCAGACATCTGTG
TCCCCCTCAAAAGTCATCCTGCCCCGGGAGGCTCCGTGCTGGTGACATGCAGCACCTCCTGTGACCAGCCCAAG
TTGTTGGGCATAGAGACCCCGTTGCCTAAAAAGGAGTTGCTCCTGCCTGGGAACAACCGGAAGGTGTATGAACTG
AGCAATGTGCAAGAAGATAGCCAACCAATGTGCTATTCAAACCTGCCCTGATGGGCAGTCAACAGCTAAAACCTTC
CTCACCGTGTACTGGACTCCAGAACGGGTGGAAGTGGCACCCTCCCTCCTTGGCAGCCAGTGGGCAAGAACCTT
ACCCTACGCTGCCAGGTGGAGGGTGGGGCACCCCGGGCCAACCTCACCGTGGTGCTGCTCCGTGGGGAGAAGGAG
CTGAAACGGGAGCCAGCTGTGGGGGAGCCCGCTGAGGTACGACCACGGTGCTGGTGAGGAGAGATCACCATGGA
GCCAATTTCTCGTGCCGCACTGAACTGGACCTGCGGGCCCCAAGGGCTGGAGCTGTTTGAGAACACCTCGGCCCCC
TACCAGCTCCAGACCTTTGTCTGCCAGCGACTCCCCACAACCTTGTCAGCCCCGGGTCTAGAGGTGGACACG
CAGGGGACCGTGGTCTGTTCCCTGGACGGGCTGTTCCAGTCTCGGAGGCCAGGTCCACCTGGCACTGGGGGAC
CAGAGGTTGAACCCACAGTCACCTATGGCAACGACTCCTTCTCGGCCAAGGCCCTCAGTCAGTGTGACCGCAGAG
GACGAGGGCACCCAGCGGTGACGTGTGAGTAATACTGGGGAACAGAGCCAGGAGACACTGCAGACAGTGACC
ATCTACAGCTTTCGGCGCCCCAACGTGATTCTGACGAAGCCAGAGGTCTCAGAAGGGACCGAGGTGACAGTGAAG
TGTGAGGGCCACCTAGAGCCAAGGTGACGCTGAATGGGGTTCCAGCCAGCCACTGGGGCCGAGGGCCAGCTC
CTGCTGAAGGCCACCCAGAGGACAACGGGCGCAGCTTCTCCTGCTCTGCAACCTTGGAGGTGGCCGGCCAGCTT
ATACACAAGAACCAGACCCGGGAGCTTCGTGTCTGTATGGCCCCGACTGGACGAGAGGGATTGTCCGGGAAAC
TGGACGTGGCCAGAAAATTCCCAGCAGACTCCAATGTGCCAGGCTTGGGGGAACCCATTGCCCGAGCTCAAGTGT
CTAAAGGATGGCACTTTCCTACTGCCCATCGGGGAATCAGTGACTGTCACTCGAGATCTTGAGGGCACCTACCTC
TGTCGGGCCAGGAGCACTCAAGGGGAGGTACCCGCGAGGTGACCGTGAATGTGCTCTCCCCCGGTATGAGATT
GTCATCATCACTGTGGTAGCAGCCGACATATAATGGGCACTGCAGGCCTCAGCACGTACCTCTATAACCGCCAG
CGGAAGATCAAGAAATACAGACTACAACAGGCCCAAAAAGGGACCCCCATGAAACCGAACACACAAGCCACGCCT
CCCTGAAACCTATCCCGGGACAGGGCCTCTTCTCGGCCTTCCCATATTGGTGGCAGTGGTGCCACACTGAACAGA
GTGGAAGACATATGCCATGCAGCTACACCTACCGGCCCTGGGACGCCGGAGGACAGGGCATTGTCTCAGTCAGA
TACAACAGCATTGTTGGGGCCATGGTACCTGCACACCTAAACACTAGGCCACGCATCTGATCTGTAGTCACATGAC
TAAGCCAAGAGGAAGGAGCAAGACTCAAGACATGATTGATGGATGTTAAAGTCTAGCCTGATGAGAGGGGAAGTG
GTGGGGGAGACATAGCCCCACCATGAGGACATACTGGGAAATACTGAAACTTGCTGCCTATTGGGTATGCTG
AGGCCCACAGACTTACAGAAGAAGTGGCCCTCCATAGACATGTGTAGCATCAAAACACAAAGGCCACACTTCCT
GACGGATGCCAGCTTGGGCACTGCTGTCTACTGACCCCAACCCCTTGATGATATGTATTTATTATTGTTATTTT
ACCAGCTATTTATTGAGTGTCTTTTATGTAGGCTAAATGAACATAGGTCTCTGGCCTCACGGAGCTCCCAGTCCA
TGTCACATTCAAGGTACCCAGGTACAGTTGTACAGGTTGTACACTGCAGGAGAGTGCCTGGCAAAAAGATCAAAT
GGGGCTGGGACTTCTCATTTGGCCAACCTGCCTTTCCCAGAAGGAGTGATTTTCTATCGGCACAAAAGCACTAT
ATGGACTGGTAATGGTTCACAGGTTACAGAGATTACCCAGTGAGGCCTTATTCCTCCCTCCCCCAAACTGACA
CCTTTGTTAGCCACCTCCCCACCCACATACTTTCTGCCAGTGTTTACAATGACACTCAGCGGTGATGTCTGGAC
ATGAGTGCCAGGGAATATGCCAAGCTATGCCTTGTCTCTTGTCTGTTTGCATTTCACTGGGAGCTTGCACT
ATTGCAGCTCCAGTTTCTGCAGTGATCAGGGTCTGCAAGCAGTGGGGAAGGGGGCCAAGGTATTGGAGGACTC
CCTCCCAGCTTTGGAAGGGTCATCCGCGTGTGTGTGTGTGTGTATGTGTAGACAAGCTCTCGCTCTGTACCCAG
GCTGGAGTGCAGTGGTGCAATCATGGTTCACTGCAGTCTTGACCTTTTGGGCTCAAGTGATCTCCACCTCAGC
CTCCTGAGTAGCTGGGACCATAGGCTCACAACACCACACCTGGCAAATTTGATTTTTTTTTTTTTTTTTCAGAGAC
GGGGTCTCGCAACATTGCCAGACTTCCTTTGTGTAGTTAATAAAGCTTTCTCAACTGCC

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FIGURE 238

MAPSSPRPALPALLVLLGALFPGPNAQTSVSPSKVILPRGGSVLVTCSTSCDQPKLLGIETPLPKKELLLPGNN
RKVYELSNVQEDSQPMCYSNCPDGQSTAKTFLTIVYWTPERVELAPLPSWQPVGKNLTLRCQVEGGAPRANLTVVL
LRGEKELKREPAVGEPAEVTTTVLVRRDHGANGFSCRTELDLRPQGLELFENTSAFYQLQTFVLPATPPQLVSPR
VLEVDTOGTVVCSLDGLFPVSEAQVHLALGDQRLNPTVTYGNDSFSAKASVSVTAEDEGTQRLTCAVILGNQSQE
TLQTVTIYSFPAPNVILTKPEVSEGTEVTVKCEAHPRAKVTLNGVPAQPLGPRAQLLLKATPEDNGRSFSCSATL
EVAGQLIHKNQTRELRVLYGPRLDERDCPGNWTWPENSQQTPMCQAWGNPLPELKCLKDGTFFPLPIGESVTVTRD
LEGTYLCCRARSTQGEVTREVTNVLSPRYEIVIIITVAAAVIMGTAGLSTYLYNRQRKIKKYRLQQAQKGTMPKP
NTQATPP

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FIGURE 239

CTTCGGTCCTGCTGTAGTGCCTTCTGCGCCAGGCCCGGTTCAATCAGCGGCCACAACCTGTCTAGGGCTCAGACAC
CACCAGCCAATGAGGGAGGGCACGTGGAGCCGCGTCTGGGCTCGCGGCTCCTGACCAATGGGGAAGTGGCATGTG
GGAGGGCGCCGGGGTTCCCCCGCCAATGGGGAGCTACGGCGCGCGGGCCGGGACTTGGAGGCGGTGCGGCGCGGC
GGGTGCGGTTTCAGTCGGTCGGCGGGCGGCAGCGGAGGAGGAGGAGGAGGAGGATGAGGAGGATGAGGAGGATG
TGGGCCACGCAGGGGCTGGCGGTGCGCGTGGCTCTGAGCGTGTGCGGGCAGCCGGGCGCTGCGGCCGGGCGAC
TGCGAAGTTTGTATTTCTTATCTGGAAGATTTTACCAGGACCTCAAAGACAGAGATGTCACATTCTCACCAGCC
ACTATTGAAAACGAACCTTATAAAGTTCTGCCGGGAAGCAAGAGGCAAAGAGAATCGGTTGTGCTACTATATCGGG
GCCACAGATGATGCAGCCACCAAAATCATCAATGAGGTATCAAAGCCTCTGGCCCACCACATCCCTGTGGAGAAG
ATCTGTGAGAAGCTTAAGAAGAAGGACAGCCAGATATGTGAGCTTAAGTATGACAAGCAGATCGACCTGAGCACA
GTGGACCTGAAGAAGCTCCGAGTTAAAGAGCTGAAGAAGATTCTGGATGACTGGGGGAGACATGCAAAGGCTGT
GCAGAAAAGTCTGACTACATCCGGAAGATAAATGAACTGATGCCTAAATATGCCCCAAGGCAGCCAGTGCACCG
ACCGATTTGTAGTCTGCTCAATCTCTGTTGCACCTGAGGGGGAAAAACAGTTCAACTGCTTACTCCCAAAACAG
CCTTTTTGTAATTTATTTTTTAAGTGGGCTCCTGACAATACTGTATCAGATGTGAAGCCTGGAGCTTTCCTGATG
ATGCTGGCCCTACAGTACCCCATGAGGGGATTCCCTTCCTTCTGTTGCTGGTGTACTCTAGGACTTCAAAGTGT
GTCTGGGATTTTTTTATTAAAGAAAAAAATTTCTAGCTGTCAAAAAAAAAA

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FIGURE 240

MGKWHVGGRRGSPRQWGATARGRDLEAVRRGGCGSVGRRRQRRRRRRRRMRRMRMWATQGLAVRVALSVLPGR
ALRPGDCEVCISYLGRFYQDLKDRDVTFSPTIENELIKFCREARGKENRLCYYIGATDDAATKIINEVSKPLAH
HIPVEKICEKLKKKDSQICELKYDKQIDLSTVDLKKLRVKELKKILDDWGETCKGCAEKSDYIRKINELMPKYAP
KAASAPTDL

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FIGURE 241

CGGAGCCGCCCCGCTGAGGTGAGAAGGAGGCGTCTGCGCTGATCGGGTCCGCCGCGCGCCAGAGCCAGAGTCGCAG
CCGAGGGGAGCCGGGGCCGGAGCCCGAGCCCGAGCCGAGCCGGAGCCCGAGCGAGCGGCGGAGACCGTGCCCCCG
CCTCGGCCCCGCGCCGCGCGGCCAGGCCCGGCATCGAGGAGGAGTGCCGGGTGCTCTCCATACAGAGCCACGTC
ATCCGCGGCTACGTGGGCAACCGGGCGGCCACGTTCCCGCTGCAGGTTTTGGGATTTGAGATTGACGCGGTGAAC
TCTGTCCAGTTTTCAAACCACACAGGCTATGCCCACTGGAAGGGCCAAGTGCTGAATTCAGATGAGCTCCAGGAG
TTGTACGAAGGCCTGAGGCTGAACAACATGAATAAATATGACTACGTGCTCACAGGTTATACGAGGGACAAGTCG
TTCTTGGCCATGGTGGTGGACATTGTGCAGGAGCTGAAGCAGCAGAACCCAGGCTGGTGTACGTGTGTGATCCA
GTCTTGGGTGACAAGTGGGACGGCGAAGGCTCGATGTACGTCCCGGAGGACCTCCTTCCCGTCTACAAAGAAAAA
GTGGTGCCGCTTGACAGACATTATCACGCCCCAACCAAGTTTGGAGCCGAGTTACTGAGTGGCCGGAAGATCCACAGC
CAGGAGGAAGCCTTGCGGGTGATGGACATGCTGCACTCTATGGGCCCCGACACCGTGGTCATCACCAGCTCCGAC
CTGCCCTCCCCGAGGGCAGCAACTACCTGATTGTGCTGGGGAGTCAGAGGAGGAGGAATCCCGCTGGCTCCGTG
GTGATGGAACGCATCCGGATGGACATTCGCAAAGTGGACGCCGTCTTTGTGGGCACTGGGGACCTGTTTGCTGCC
ATGCTCCTGGCGTGGACACACAAGCACCCCAATAACCTCAAGGTGGCCTGTGAGAAGACCGTGTCTACCTTGAC
CACGTTCTGCAGAGGACCATCCAGTGTGCAAAAGCCCAGGCCGGGGAAGGAGTGAGGCCAGCCCCATGCAGCTG
GAGCTGCGGATGGTGCAGAGCAAAAGGGACATCGAGGACCCAGAGATCGTCGTCCAGGCCACGGTGCTGTGAGGG
CCCCGCCGCTTGCCCGTGACACGCAGCGCGTTGGTGTCTCCGTGTTTGTCCCTGTGAAAACATGTAACGTCTGCC
TTAGAGCCATGACCGAACTTGATATTTTTTTCTTTTCATGAGTGTCCGGCATCTGCTGGTCTTCATTGTGAAACG
TGCCAGTCGTGCTTTGTGAAAAATAACAAAGTGGTCACAAAAA

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FIGURE 242

MEEECRVLSIQSHVIRGYVGNRAATFPLQVLGFEIDAVNSVQFSNHTGYAHWKGQVLNSDELQELYEGLRLNNMN
KYDYVLTGYTRDKSFLAMVVDIVQELKQQNPRLVYVCDPVLGDKWDGEGSMYVPEDLLPVYKEKVVPLADIITPN
QFEAELLSGRKIHSQEEALRVMDMLHSMGPDTVVITSSDLPS PQGSNYLIVLGSQRRRNPA GSVVMERIRMDIRK
VDAVFVGTGDLFAAMLLAWTHKHPNNLKVACEKTVSTLHHVLQRTIQCAKAQAGEGVRPSPMQLELRMVQSKRDI
EDPEIVVQATVL

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FIGURE 243

GAATTCccccccccccccagtgctccgCGCGCTCTTGACGTCCGGAGCCCCTGGAGTAGGCGCTTCCGGCCATT
CATACTGCAGTCGGTCAGTGTTTCGGTTGAAGGATTCTGTGTGCTGTCCGACCCAGAGGGTGACGGCGCCGCTAGG
ATGAAGCTCGTGAGATTTTTGATGAAATTGAGTCATGAAACTGTAACCATTGAATTGAAGAACGGAACACAGGTC
CATGGAACAATCACAGGTGTGGATGTCAGCATGAATACACATCTTAAAGCTGTGAAAATGACCCTGAAGAACAGA
GAACCTGTACAGCTGGAACGCTGAGTATTCGAGGAAAATAACATTTCGGTATTTTATTCTACCAGACAGTTTACCT
CTGGATACACTACTTGTGGATGTTGAACCTAAGGTGAAATCTAAGAAAAGGGAAGCTGTTGCAGGAAGAGGCAGA
GGAAGAGGAAGAGGAAGAGGACGTGGCCGTGGCAGAGGAAGAGGGGTCTTAGGCGATTAATGTCTCTCAAGATTT
CAAAGTCATATGAGATTTGGGATATTTTTTGTACAGGTTGTGTTTATGTCAGTTTTTAATAAACATAAAATG
TGGGACAGAGCTGTCTATTTAGTATATCAAAGTTTTAGTAGTTTCCTCCACATTCACGAAATTACCACAGTGAGA
GCTAAGCATTTCTACTGGGCAGTTTCATTTTTAGTTGATCAGGTTTTAAGTTTTTGAACATAAAATTTTTCTTTTT
CTTTTTATGATGAATAAGGTTAAAATAAAAGCCTTAGACAAATTAAATTTGGCAGAGTTTAATTGAGCAAAGGAC
AATTCACAAATCAGGTAGCCCCCTGAACCATAATAGGCTCAGAGGCTTCAGCCCAGCTGCATAGTTGAAGATTTAT
GGACAGAAGGAAAGTGATGTATGGAATGGAAGTGAGATACAGCAACAGCCGGATTAGTTACAGTTCAGCGTTT
GCCTTATTTGAATATGGTTTGAACAGTTCGCTGTCTTTGGTTGGCTGAAACTTAGTGATTGCCACAAGAGTAGGG
TACCGTCTGTTTACACGTCCAGTTAGGCTACAGTTCTATGTACTGAGAAACCTTTAAGCTGAACTTGAGATATGT
AAAGAGACTTTAGGCTAACTTAACAATATATATAGGAATATATCCCTTCTACTTCACATGCACTGAATATGCAT
TTTATTGCTTTACTCTTCATTCTGTGGCACCTACCCACAGGGGAAGTAAGAAGTTTGTGTTTGGTATTTTCGGAAAC
TAAAGTCCTTATGGGATGGGGTCTAGAATTGATTCTCCTTTCTGAGTTTTACTCCACGGAGTCTTAGGTACCTG
GTAAAAAGTTGTCTTCTAAATTAAGGGTCATTGCTTTGTTGTCTAGCTGCTAATGTCTTACTTTTGTGTTCTTTG
CTTTTAAATCAGTTCTTAATAGGATATAGTTTTATGTTTTCCAAGTTATAACTTGAGTTAATGGTCACTAGATT
ATCAGTTATGAGCAGTGTTAAATCTCCTATTAATGTGTAATGTACCTGTGAGTGCCTCCTTTATTAAGGGGTTT
TTTGAGAATAAAAGAGAAAAGACCTACTTTATTTGACAGCAAAAAAAAAAAGGAATTC

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FIGURE 244

MKLVRFLMKLSHETVTIELKNGTQVHGTITGVDVSMNTHLKAVKMTLKNREPVOLETLSIRGNNIRYFILPDSL
LDTLLVDVEPKVKSKKREAVAGRGRGRGRGRGRGRGRGRGRGGPRR

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FIGURE 245

CGACCACCCGGCCTCGGCCAATAAGCGCCGCCCTCTCGCCCCCGTGTACTGGGTAGAAGAAAACAAAAACAAAC
AGAGCGAGAAGGGCCAGAGACTCTCCGAGGCGGCGGCAGAGACAGAAGAGCGGGGTCTGGGGCCGGCTGACCAGGA
ACCTGGGCGAGCAGCGGGGGGGCCGAGGGATTCTGAAGGAAGATTTCCATTAGGTAATTTGTTTAATCAGTGC
AAGCGAAATTAAGGGAAAATGATGTAGAAAATGAGCAGATACTGAATGTAAACCCTGCAGATCCTGATAACTTA
AGTGACTCTCTCTTTTCCGGTGATGAAGAAAATGCTGGGACTGAGGAAATAAAGAATGAAATAAATGGAAATTGG
ATTCAGCATCCTCCATTAAACGAAGCTAGAATTAATGCCAAGGCAAAAAGGCGACTAAGGAAAACTCATCCCGG
GACTCTGGCAGAGGCGATTCCGGTCAGCGACAGTGGGAGTGACGCCCTTAGAAGTGGATTAAGTGTGCCAACCACT
CCAAAGGGAAGGTTGCTGGATAGGCGATCCAGATCTGGGAAAGGAAGGGGACTACCAAAGAAAGGTGGTGCAGGA
GGCAAAGGTGTCTGGGGTACACCTGGACAGGTGTATGATGTGGAGGAGGTGGATGTGAAAGATCCTAACTATGAT
GATGACCAGGAGAACTGTGTTTTATGAACTGTAGTTTTGCCTTTGGATGAAAGGCGATTTGAGAAGACTTTAACA
CCAATCATACAGGAATATTTTGAGCATGGAGATACTAATGAAGTTGCGGAAATGTTAAGAGATTTAAATCTTGGT
GAAATGAAAAGTGGAGTACCACTGTTGGCAGTATCCTTAGCATTTGGAGGGGAAGGCTAGTCATAGAGAGATGACA
TCTAAGCTTCTTTCTGACCTTTGTGGGACAGTAATGAGCACAACCTGATGTGGAAAAATCATTGTATAAATTGTTG
AAAGATCTACCTGAATTAGCACTGGATACTCCTAGAGCACCACAGTTGGTGGGCCAGTTTATTGCTAGAGCTGTT
GGAGATGGAATTTTATGTAATACCTATATTGATAGTTACAAAGGAACTGTAGATTGTGTGCAGGCTAGAGCTGCT
CTGGATAAGGCTACCGTGCTTCTGAGTATGTCTAAAGGTGGAAAGCGTAAAGATAGTGTGTGGGGCTCTGGAGGT
GGGCGACAACTCTGCAATCACCTTGTTAAAGAGATTGATATGCTGCTGAAAGAATATTTACTCTCTGGAGACATA
TCTGAAGCTGAACATTGCCTTAAGGAACTGGAAGTACCTCATTTTCACCATGAGCTTGTATATGAAGCTATTATA
ATGGTTTTAGAGTCAACTGGAGAAAGTACATTTAAGATGATTTTGGATTTATTAAAGTCCCTTTGGAAGTCTTCT
ACCATTACTGTAGACCAAATGAAAAGAGGTTATGAGAGAATTTACAATGAAATTCGGACATTAATCTGGATGTC
CCACATTCATACTCTGTGCTGGAGCGGTTTTGTAGAAGAATGTTTTCAGGCTGGAATAATTTCCAAACAACCTCAGA
GATCTTTGTCTTCAAGGGGCGAGAAAGCGTTTTGTAAAGCGAAGGAGATGGAGGTCGTCTTAAACCAGAGAGCTAC
TGAATATAAGAATCTTGCAGTCTTAGATGTTATAAAAAATATATATCTGAATTGTAAGAGTTGTTAGCACAAAGTT
TTTTTTTTTTTTTTTTTAAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGG
GAATTTTTTAAAGGAAATGTTTTTCTTTTTTTTTTGTGTTTTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCT
TCTTAAGTGGAATATTCTAATAAGCTACCTTTTGTAAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTGCAT
TGATGTCTGACTGCCACTCCTTTCTTTCAAGGACAGTGTGTTTTGTAGTAAAATCACTGGTTTTATACAAAGCTTT
ATTTAGGGGGTAAAGTTAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAA
AAAAGAAAGTTATTTCTTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAAC
ATACTGATTGGTCTTAAAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTCTACAAAACCTGGAA
AAATGAACCTGGTTCTAGAAGAATGTACACCAAATAAAACATGTGAAGCAGTAAAAAAAAAAAAAAAAA

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FIGURE 246

MDVENEQILNVNPADPDNLSDSLFSGDEENAGTEEIKNEINGNWISASSINEARINAKAKRRLRKNSSRDSGRGD
SVSDSGSDALRSLTVPTSPKGRLLDRRSRSGKGRGLPKKGGAGGKGVWGTPGQVYDVEEVDVKDPENYDDDQENC
VYETVVLPLDERAFEKTLTPIIQEYFEHGDNEVAEMLRDLNLGEMKSGVPVLAVSLALEGKASHREMTSKLLSD
LCGTMSTTDVEKSFDKLLKDLPELALDTPRAPQLVGQFIARAVGDGILCNTYIDSYGTVDCVQARAALDKATV
LLSMSKGGKRKDSVWGSQQSVNHLVKEIDMLLKEYLLSGDISEAEHCLKELEVPHFHHELVYEAIMVLEST
GESTFKMILDLLKSLWKSSTITVDQMKRGYERIYNEIPDINLDVPHSYSVLERFVEECFQAGIISKQLRDLCP
SRGRKRFVSEGDGGRLKPESY

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FIGURE 247

CGACCACCCGGCCTCGGCCAATAAGCGCCGCCCTCTCGCCCCGTGTTACTGGGTAGAAGAAAACAAAAACAAAC
AGAGCGAGAAGGGCCAGAGACTCTCCGAGGCGGCGGCAGAGACAGAAGAGCGGGGTCTGGGGCCGGCTGACCAGGA
ACCTGGGCGAGCAGCGCGGGGGCCCGAGGGATTCTGAAGGAAGATTTCCATTAGGTAATTTGTTTAAATCAGTGC
AAGCGAAATTAAGGGAAAATGGATGTAGAAAATGAGCAGATACTGAATGTAAACCCTGCAGATCCTGATAACTTA
AGTGACTCTCTCTTTTCCGGTGATGAAGAAAATGCTGGGACTGAGGAAATAAAGAATGAAATAAATGGAAATTGG
ATTTAGCATCCTCCATTAAACGAAGCTAGAATTAATGCCAAGGCAAAAAGGCGACTAAGGAAAACTCATCCCCG
GACTCTGGCAGAGGCGATTCCGGTCAGCGACAGTGGGAGTGACGCCCTTAGAAGTGGATTAACTGTGCCAACCAGT
CCAAAGGGAAGGTTGCTGGATAGGCGATCCAGATCTGGGAAAGGAAGGGGACTACCAAGAAAGGTGGTGCAGGA
GGCAAAGGTGTCTGGGGTACACCTGGACAGGTGTATGATGTGGAGGAGGTGGATGTGAAAGATCCTAACTATGAT
GATGACCAGGAGAATGTGTTTTATGAACTGTAGTTTTGCCTTTGGATGAAAGGGCATTGAGAAGACTTTAACA
CCAATCATACAGGAATATTTTGAGCATGGAGATACTAATGAAGTTGCGGAAATGTTAAGAGATTTAAATCTTGGT
GAAATGAAAAGTGGAGTACCAGTGTGGCAGTATCCTTAGCATTGGAGGGGAAGGCTAGTCATAGAGAGATGACA
TCTAAGCTTCTTTCTGACCTTTGTGGGACAGTAATGAGCACAACCTGATGTGGAAAAATCATTGATAAATTGTTG
AAAGATCTACCTGAATTAGCACTGGATACTCCTAGAGCACCACAGTTGGTGGGCCAGTTTATTGCTAGAGCTGTT
GGAGATGGAATTTTATGTAATACCTATATTGATAGTTACAAAGGAACTGTAGATTGTGTGCAGGCTAGAGCTGCT
CTGGATAAGGCTACCGTGCTTCTGAGTATGTCTAAAGGTGGAAAGCGTAAAGATAGTGTGTGGGGCTCTGGAGGT
GGGCAGCAATCTGTCAATCACCTTGTTAAAGAGATTGATATGCTGCTGAAAGAATATTTACTCTCTGGAGACATA
TCTGAAGCTGAACATTGCCTTAAGGAACTGGAAGTACCTCATTTTCACCATGAGCTTGTATATGAAGCTATTATA
ATGGTTTTAGAGTCAACTGGAGAAAGTACATTTAAGATGATTTTGGATTTATTAAAGTCCCTTTGGAAGTCTTCT
ACCATTACTGTAGACCAAATGAAAAGAGGTTATGAGAGAATTTACAATGAAATTCGGACATTAATCTGGATGTC
CCACATTCATACTCTGTGCTGGAGCGGTTTGTAGAAGAATGTTTTCAGGCTGGAATAATTTCCAAACAACCTCAGA
GATCTTTGTCCCTTCAAGGGGCAGAAAGCGTTTTGTAAAGCGAAGGAGATGGAGGTCGTCTTAAACCAGAGAGCTAC
TGAATATAAGAACTCTTGCAGTCTTAGATGTTATAAAAAATATATATCTGAATTGTAAGAGTTGTTAGCACAAAGTT
TTTTTTTTTTTTTTTTTAAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGG
GAATTTTTAAAGGAAATGTTTTTCTTTTTTTTTTGTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCT
TCTTAAGTGGAATATTCTAATAAGCTACCTTTTGTAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTGCAT
TGATGTCTGACTGCCACTCCTTTCTTTCAAGGACAGTGTTCCTTTGTAGTAAAATCACTGGTTTATACAAAGCTTT
ATTTAGGGGGTAAAGTTAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAA
AAAAGAAAGTTATTTCTTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAAC
ATACTGATTGGTCTTAAAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTTCTACAAAACCTGGAA
AAATGAACCTGGTCTAGAGAATGTACACCAAATAAAACATGTGAAGCAGTAAAAAAAAAAAAAAAAA

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FIGURE 248

MTKYPDNLSDSLFSGDEENAGTEEIKNEINGNWISASSINEARINAKAKRRLRKNSSRDSGRGDSVSDSGSDALR
SGLTVPTSPKGRLLDRRSRSGKGRGLPKKGGAGGKGVWGTPGQVYDVEEVDVKDPNYDDDQENCVYETVVLPLDE
RAFEKTLTPIIQEYFEHGDNEVAEMLRDLNLGEMKSGVPVLAVSLALEGKASHREMTSKLLSDLCGTVMSTTDV
EKSFDKLLKDLPELALDTPRAPQLVGQFIARAVGDGILCNTYIDSYKGTVDCVQARAALDKATVLLSMSKGGKRK
DSVWGSGGGQQSVNHLVKEIDMLLKEYLLSGDISEAEHCLKELEVPHFHHELVEAIIMVLESTGESTFKMILD
LKSLWKSSTITVDQMKRGYERIYNEIPDINLDVPHSYSVLERFVEECFQAGIISKQLRDLCP SRGRKRFVSEGDG
GRLKPESY

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FIGURE 249

CGGAGCCAGCGTGGGAGGCCGCTGCCGTCGCGCGCCTTGGTTTTTCTGTTTCCTTTTTTTTTTTTTTTTTTAACTT
CCTGCCTATCACACGCAGCCATCAGCCCACAAAGACAATGACTACCAACGCGGGCCCCCTTGACCCATACTGGCCT
CAGCACCTAAGACTGGACAACCTTTGTACCTAATGACCGCCCCACCTGGCATATACTGGCTGGCCTCTTCTCTGTC
ACAGGGGTCTTAGTCGTGACCACATGGCTGTTGTCAGGTCGTGCTGCGGTTGTCCCATTTGGGGACTTGGCGGCGA
CTGTCCCTGTGCTGGTTTTGCAGTGTGTGGGTTCAATCACCTGGTGATCGAGGGCTGGTTCGTTCTCTACTACGAA
GACCTGCTTGGAGACCAAGCCTTCTTATCTCAACTCTGGAAGAGTATGCCAAGGGAGACAGCCGATACATCCTG
GGTGACAACCTTACAGTGTGCATGGAAACCATCACAGCTTGCTGTGGGGACCACTCAGCCTGTGGGTGGTGATC
GCCTTTCTCCGCCAGCATCCCCCTCCGCTTCATTCTACAGCTTGTGGTCTCTGTGGGCCAGATCTATGGGGATGTG
CTCTACTTCCCTGACAGAGCACCGCGACGGATTCCAGCACGGAGAGCTGGGCCACCCTCTCTACTTCTGGTTTTAC
TTTGTCTTCATGAATGCCCTGTGGCTGGTGCTGCCTGGAGTCCTTGTGCTTGATGCTGTGAAGCACCTCACTCAT
GCCCAGAGCACGCTGGATGCCAAGGCCACAAAAGCCAAGAGCAAGAAGAACTGAGGAGTGGTGGACCAGGCTCGA
ACACTGGCCGAGGAGGAGCTCTCTGCCTGCCAGAAGAGTCTAGTCCTGCTCCCACAGTTTGGAGGGACAAAGCTA
ATTGATCTGTCACTCAGGCTCATGGGCAGGCACAAGAAGGGGAATAAAGGGGCTGTGTGAAGGCACTGCTGGG
AGCCATTAGAACACAGATACAAGAGAAGCCAGGAGGTCTATGATGGTGACGATTTTTAAATCAGGAAATAAAAG
ATCTTGACTCTAAAAAAAAAAAA

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FIGURE 250

MTTNAGPLHPYWPQHRLDNFVPNDRPTWHILAGLFSVTGVLVVTTWLLSGRAAVVPLGTWRRLSLCWFAVCGFI
HLVIEGWFLVLYYEDLLGDQAFLSQLWKEYAKGDSRYILGDNFTVCMETITACLWGFLSLWVVI AFLRQHPLRFIL
QLVVS VGQIYGDVLYFLTEHRDGFQHGELGHPLYFWFYFVFMNALWLVLP GVLVLDAVKHLTHAQSTLDAKATKA
KSKKN

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FIGURE 251A

CGTGCGGCGGTGGGCTGGTCTTCCGCGGCCGCGCTTGCGCCGCGGCGGAGGGTGGGCGCGCGGGGAGCGGGATGG
AGCTGGGGCGACCTTGCTGGAGGTACTGGCCTCAGCCCTTTCTCCCGCTTCCCCACCCCTCTTACCCCAGATT
ACATTCTCTGTGTGGTGTCTTTACTGCAGATGAAGATTGGGGGCGAGCACTTGGCAGGTCATGAAGGGGTCC
AATTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGATTCCAACCTCGAGAAAAAGGGCTGAGTTTGA
TTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTGAGAAATGCCAAAGTTGAAGATTTAAGGAGTT
TAGCCAACTTTTTTGGATCTTGCACTGAACTTTTGTCTGGCTGTCAATATTTTGGACAGGTTCTTGCTCTTA
TGAAGGTGAAACCTAAACATTTGTCTGCATTGGAGTCTGTTCTTTTTTGTCTGGCTGCTAGAATAGTTGAAGAAG
ACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAGTGTAATGTACTGCTTCTGACATAAAACGGA
TGGAAAAAATAATTTAGAAAAATGCACTATGAATTGGAAGCTACTACTGCCTTAACTTTTTGCACTTATACC
ATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTGAGCCTTGATAAACTAGAAGCTCAGCTGAAAG
CTTGCAACTGCCGACTCATCTTTTCAAAAGCAAAACCATCTGTATTAGCCTTGTCCTTCTCAATTTGGAAGTGG
AACTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTTAAAAAACATTCCAAGATTAATGACACTGAGT
TCTTCTACTGGAGAGAGTTGGTTTTCTAAATGCCTAGCCGAGTATTCTTCTCCTGAATGTTGCAAACCAGATCTTA
AGAAGTTGGTTTTGGATCGTTTTCAAGGCGCACAGCCAGAACCTCCACAACAGCTACTATAGTGTCTGAGCTGC
CAACGATACCTGAGGGGGGTTGTTTTGATGAAAGTGAAAGTGAGGACTCTTGTAAGATATGAGTTGTGGAGAGG
AGAGTCTCAGCAGCTCTCCTCCAGTGATCAAGAGTGACCTTCTTTTTCAACTTCAAAGTGGCACAAACACTGT
GCTTTCCATCTTAGAAATCTGATTGTTCTGTGCAATTTATATTTACAGGTTTCAAAGCAATAAATGGGGGAATA
GGTAGTTTTCTGGTTTTAGCCCCCATCTAGTCAGGAATTAATATACTGGAATACCTACCTTCTATTTGTTATTTCAG
ATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAATGGGGTAGTGCTCTTAAACCATTAAACAGTACT
TTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACTTTGGGGAGGAGGGAAGGTGCTGATACCTTCAA
TTTTGTTACTTTTTCAAGATTTTTTAAAAATAACTAGTGTAGCTTATCTTAAACATTTTATAAAACCTTCAGATGTCT
TTAAGCAGATTGGAAGTATGCAAGTGCTTCCCTAGCAGGGACAGTGGATAATCCTTAATGGTTTTATCATAGATTT
CACCTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGTCAAACACATTTTGTGTGTTTTGTTTTTAAAT
GATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGGAATTATAATATTGACATTTCTGTGATTTTTAT
ATATGTAATGTCTTAATTGAGATTTCTGTTAAGGCAGAAATAATTAGGCTAGGGCTCTTAGTTTTTCATTCTTATT
GCCAAGTATTGTCAAACATATGGTATTATTTTAAATGTTACTTTAAAAATCCATAATCTGCTAGTTTTGCATGTAC
TTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTATGGAATTGATAAATGTTGATCTGGTGTAGTATAT
TTTATCGCATTTTCTTATATTAATAAATGTCTGCATGATTACATTTTATTTCCTTTGTAATTTACATTTTCAAGAT
AGTGTATTGCTATATGGGTGCCAAGATTGAATATGAAGAACCCGAGTGTTTGTAGTATTATAGTTTTAAGCAAAAT
CTGTGTGGTGATACAGCCATAAGAATGGGGCTTATATAAACTCTGTACATGTAAGATTTTGTACAGAGAATTTTT
AACTTTATAAATGTATATGAACATGTAAATCTTTTAAATGTACATAAAATACTGTATTTTTTTTACCTTGTGTG
TGATAGTCTAGTCATTGCATGTAAATATAATTTATTATGTATTCTGTAGTATAAATCATACATTGATGACTTACA
TTTTTACTGGTAAGTCAACATCCGTTGGATGTTTTCTGAAGTGGCTCTTTTTGAAGTGATAATAGATTGTAATTC
AAAAATAAATTATTAATGAATTCCTTGTGTTGGGATCACATCTTAATTTTTTAATCTGTTAAAGTTCTTGATGT
ATTTTAATGAGAAGACTTTAGGTGAGGCTACAGTGATTCCAGAGTGAGCCTTCTAACTGGCTAGCAGAAGTTCTC
TAGGTTTGGCATCTGTGCCCTTGGAGATACTGAAAGAGAATCTGTCAATTTGACAATTGACCTCTTGTGGGATGGA
CTCATTAAGTATGCTCTCAGAGACTGGTATATTACCAGAATGCCTATTAATTTTCAAGTGAGAGGCAACAGGTATT
AAGTAGAACAGAAATGCTCAGGTTGGCAGATTAGAACGATCTTTTCAGGAGACAAAGCAAGTTTTAATCAGTTGTTT
GGTTAATAAGTATGGGGTGTTGCTGTGATAGGGCCCCCGCCAGCTTCTGGCTCTTGTGGACCTCAAAGTATCAG
GTGGTTTTGCAAGTGGTGGTCTTTTCCCTGCCCCACCCCAATAGGTTCCCCATCTGTCTAGTTTGATTTTTGTA
GACCTTTGTTTTCTCTAGTTAGAAAATCAGGTACACTGAATATGGTTTTTCATGTAACACCTCTTCTCTGGAGATA
GGGGTATGTTTTCTTACCCTTCTAGTGGAGAATCCTACTTGAGGATGACCTTTCCTCTCTTACTAAATAATATTA
GTAAATAGTGGGCAATATATTCTGCTTTCAGATTTTGATTTGTTGAGATGTAAAAGTTGTTTGGGGCTTACCAA
TCTCAAGACTCTCTTTAGCTCCTGCAGGATTGTATTGCTTTTCTTACTGGATATTTTTCTGGGTAAGCATCTTT
GTGGCTTCATCTCTTCCCCTGTGGTTTTTCAAGTGTATTTAGTCGAGACCTCTCTGCTGAGCTTGCAACCTGTTTA
TTCACATGGCCTGCCATGCCACTTGGAGGTTTCTGATTACTCCAAACCTGCTGGTTCTTTATGTCTTTCTCAGC
GAATAATCCATCTGTTTCATGTTGGAACCTTAGGTGATATGCTCATCTCCTTTTGCCTGTTTATGGAGGTACCA
GCCTCTATCATTGTATGATTTTCGTTTACACTGTTTATATCTCTGTCCCCCTTTTTCTGCCATTGGCATGGT

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FIGURE 251B

TTAGACCTGTACTCTTTATCAGCAGAGGTACTGTAATATATTTGTGATCCCTCAGCTTCCAGGCTTACTCCTGGT
CTCTGCCTTCCTATCTACATATCCTTTTAAAATAAAATTTTAACTATCTCCTGAAAAATTGTTGAGTAGGTCACG
CACAATCAGGAGAAAAATCTATTCATGACATACAAGTCTCTGTCTAATCTGAACACTGCACCTGTCTCTGGCCTT
TTTTTCTTGTCAATTCCTAGACCTTAAAAAATGTGTATTGAGAAAGAACTCTGTTAGCTATACAGAAGATGAACT
GGGCAATATAGAGTAGCAGCATGGAGACCAGTCTGACTGAACTAAGGCAGTGGAAGTGTGGATGAGGAAGAGAGG
TGAAAAATTGAGAAGCGCTATCCTTTTCTCTTTGGGCATTATTAGGAGGCTCACAGACAAGTCCAGGAGTCTGGTTA
TACCCTCCTGTGCCATTCAACCAGGTGGCTTTCCCATGACTGTGATGAATAAAATTGAGAAGCCCTGCCCTTTT
CAGAGCAGAGGGTGAGGAGAAAGCTACCATTTTGTCTCATCCTTACCCCGTTGACTTGGCGAGAGATTTGACC
TTTCAGGTTTTGATCCTGTCAATTTTCTAGGATGTGGTGCACGCACTTTGCTGTTGCGCATGGTGAAGTATTGTGC
CTAGGTCCTGGGTCTTCACTGTGTTTGGCTCTGCTACTGTTTCTCCTCCCAGGAAGTGTGGTTAGACAAATAATG
TGTTTTAATTACCTGTCACTCAGGATTAATACATACTCAGGTTAACTGTAGAGAGGCATTGGCTTCAGAACAC
TCCTCGTGACAATTTTAACCATTTTCTTTGTCTAGAGTCTGCCTTTTTCTTTTTTACAATTTCTTTTATTTCAAC
ACTAGGTTTCAATATGGTGTTCCTGCTACCTCCCACCTCCCTCCTCCCTCATCACACATGCAAATTGTCAGCTTA
TTGAGACAACCCACTTAGATTCATATATGGACAAGGACAAGGTATTTGCATTTGTTACTGGAATTCAGTTTTCC
TAACTATTTACTACCAGAAATGGTCAATAACTTACTTTGTGGTTAGCAAATCAAATTGTGTGATAGATAGTTTCC
CAGTATGATGGCCAGTCAGTCTTTCCATCCCTGTGCCTACATGCTGCTCTTCCCGTCCACAAGTGGAGTCTGTTT
CTCTTGAGTTTTGGCTGGCCTTATGAATGGCTTTGCTTACTGAAGTGCAGCAGAAGAAATTTAGTATATGTCCAA
GCCTAGGCTTTAAGAGACTGGCAGCTTTCCTTTTATCCTTTTTTGGAAAGCTAGCCACCATGCTGCAAAGAAGCTCA
GCTGGATTACTGAAAGATGAGAGGCCATGTGGAGAGAGACTCTTGAGGATGAGAGATTATCTTGATGTTCCAGC
CTTAAGCTCCCAGCTGAATGTGGGTGTATCCTCAGCTACACCACAGAAAACAGAGGAACTACTCAGTCGATCCCA
ATCAACCCACAGACTCACTAGAAATAACAAATTATTGTTTTAAGCCACGAGGTTTTGGGGGAGGGTTGTTAAACA
GTAATAGATAAGTGAGACAGATTGCTTGTTATTTATGGTCAAATGGTGATTATCTCTGGTGAGATTACAGGTGAT
GTTTTTTTTAAGTTATGCCTATCTGTAGTTTCCTTTTTTTTCCATAAAATTGATTGAAATTATTAGTGATTAACAG
AATAAAGAATGAACTTTAAACACACACGCTGGTTATATGCTTCCTCTAATTAAAATTCATGGCTCTCACCAC

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FIGURE 252

CGGGLVFRGRRCAAAEGGRAGSGMELGRPLLEVLAASALSPASPPLLPPDYILCVVSLQMKDLGAEHLAGHEGVQ
LLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCCTETFLAVNILDRLALM
KVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKMEKIISEKLHYELEATTALNFLHLYH
TIILCHTSEKKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLEILLVKKHSHKINDTEF
FYWRELVSKCLAEYSSPECCKPDLKLVWIVSRRTAQNLHNSYYSVPELPTIPEGGCFDESESEDSCEDMSCGEE
SLSSSPPSDQECTFFFNFKVAQTLCFPS

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FIGURE 253

CCGGTCGGATGCCGGACCGGGGGCACCGCTGAGGCGGTGGGTCCCCGACCTGCGAGACAGGTTTGGAAGCCCCCG
CTGCGCCCACTCCGTGCGGACCGCGAGGCCGCGGGCGGGTGGAGGCGCGTCTCCGGCACCATGAAGGATTTGGGG
GCAGAGCACTTGCGCAGGTCATGAAGGGGTCCAACCTTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGA
TTCCAACCTCGAGAAAAAGGGCTGAGTTTGATTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTG
AGAAATGCCAAAGTTGAAGATTTAAGGAGTTTAGCCAACCTTTTTTGGATCTTGCACTGAAACTTTTGTCTGGCT
GTCAATATTTTGGACAGGTTCTTGCTCTTATGAAGGTGAAACCTAAACATTTGTCTTGCAATTGGAGTCTGTTCT
TTTTTGCTGGCTGCTAGAAATAGTTGAAGAAGACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAG
TGTAATGTACTGCTTCTGACATAAAACGGATGGAAAAATAATTTAGAAAAATTGCACTATGAATTGGAAGCT
ACTACTGCCTTAAACTTTTTGCACTTATACCATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTG
AGCCTTGATAAACTAGAAGCTCAGCTGAAAGCTTGCAACTGCCGACTCATCTTTTCAAAGCAAACCATCTGTA
TTAGCCTTGTGCCTTCTCAATTTGGAAGTGGAACCTTTGAAATCTGTTGAATTACTGGAAATCTCTTGCTAGTT
AA₃AAACATTCCAAGATTAATGACACTGAGTTCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTAT
TCTTCTCCTGAATGTTGCAAACAGATCTTAAGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCAGAACCTC
CACAACAGCTACTATAGTTTCTGAGCTGCCAACGATACCTGAGGGGGGTTGTTTTGATGAAAGTGAAAGTGAG
GACTCTTGTGAAGATATGAGTTGTGGAGAGGAGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGCACCTTC
TTTTTCAACTTCAAAGTGGCACAAACACTGTGCTTTCCATCTTTAGAAATCTGATTGTTCTGTCAGAATTTATATT
TACAGGGTTTCAAAGCAATAAATGGGGGAATAGGTAGTTTCTCGGTTTAGCCCCCATCTAGTCAGGAATTAATAT
ACTGGAATACCTACCTTCTATTTGTTATTCAGATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAAT
GGGGTAGTGCCTCTTAAACCATTAACAGTACTTTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACT
TTGGGGAGGAGGGAAGGTGCTGATACCTTCAATTTGTTACTTTTTCAAGATTTTTAAAAATAACTAGTGTAGCTTA
TCTTAAACATTTTTATAAAACCTTCAGATGTCTTTAAGCAGATTGGAAGTATGCAAGTGCTTCCTTAGCAGGGACA
GTGGATAATCCTTAATGGTTTATCATAGATTTACCCCTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGT
CAAACACATTTTTGTTGTTTTGTTTTTAAATGATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGG
AATTATAATATTGACATTTCTGTGATTTTATATATGTAATGTCTTAATTGAGATTTGTGTTAAGGCAGAAATAA
TTAGGCTAGGGCTCTTAGTTTTTATTCTATTGCCCCAAGTATTGTCAAACATATGGTATTATTTAATGTTACTT
TAAAAATCCATAATCTGCTAGTTTTGCATGTACTTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTAT
GGAATTGATAAATGTTGATCTGGTGTAGTATATTTATCCGCATTTTCTTATATTAATAAATGTTCTGCAATGATT
ACATTTTATTTGCCTTTGT

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FIGURE 254

MKDLGAEHLAGHEGVQLLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTE
TFVLAVNILDRLALMKVKPKHLSCIGVCSFLAARIVEEDCNIPSTHDVIRISQCKCTASDIKRMEKIISEKLH
YELEATTALNFLHLYHTIILCHTSERKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLE
ILLLVKKHSKINDTEFFYWRELVSCLAEYSSPECCPKDLKKLVWIVSRRTAQNHLHNSYYSVPPELPTIPEGGCFD
ESESDESCEDMSCGEESLSSSPSDQECTFFFNFKVAQTLCFPS

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FIGURE 255

GGCGGACCGAAGAACGCAGGAAGGGGGCCGGGGGGACCCGCCCCCGGCCGGCCGCAGCCATGAAC TCCAACGTGG
AGAACCTACCCCCGCACATCATCCGCCTGGTGTACAAGGAGGTGACGACACTGACCGCAGACCCACCCGATGGCA
TCAAGGTCTTTCCCAACGAGGAGGACCTACCGACCTCCAGGTCACCATCGAGGGCCCTGAGGGGACCCCATATG
CTGGAGGTCTGTTCCGCATGAAACTCCTGCTGGGGAAGGACTTCCCTGCCTCCCCACCCAAGGGCTACTTCCTGA
CCAAGATCTTCCACCCGAACGTGGGCGCCAATGGCGAGATCTGCGTCAACGTGCTCAAGAGGGACTGGACGGCTG
AGCTGGGCATCCGACACGTACTGCTGACCATCAAGTGCCTGCTGATCCACCCTAACCCCGAGTCTGCACTCAACG
AGGAGGCGGGCCGCCTGCTCTTGAGAACTACGAGGAGTATGCGGCTCGGGCCCGTCTGCTCACAGAGATCCACG
GGGGCGCCGGCGGGCCAGCGGCAGGGCCGAAGCCGGTCGGGCCCTGGCCAGTGGCACTGAAGCTTCCTCCACCG
ACCTGGGGCCCCAGGGGGCCCGGAGGGGCTGAGGGTCCCATGGCCAAGAAGCATGCTGGCGAGCGCGATAAGA
AGCTGGCGGCCAAGAAAAAGACGGACAAGAAGCGGGCGCTGCGGGCGCTGCGGCGGCTGTAGTGGGCTCTCTTCC
TCCTTCCACCGTGACCCCAACCTCTCCTGTCCCCTCCCTCCAACCTCTGTCTCTAAGTTATTTAAATTATGGCTGG
GGTCGGGGAGGGTACAGGGGGCACTGGGACCTGGATTTGTTTTTCTAAATAAAGTTGGAAAAGCA

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FIGURE 256

MNSNVENLPPHIIRLVYKEVTTLTADPPDGIKVPNEEDLTDLQVTIEGPEGTPYAGGLFRMKLLLGKDFPASPP
KGYFLTKIFHPNVGANGEICVNVLKRDWTAELGIRHVLLTIKCLLIHPNPESALNEEAGRLLLENYEEYAARARL
LTEIHGGAGGPSGRAEAGRALASGTEASSTDPGAPGGPGGAEGPMAKKHAGERDKKLAAKKKTDKKRALRALRRL

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FIGURE 257A

ATTCAGCCGGTGC GCGCGGCGGGAGGCA GTGGCTGGGGAGTCCCGTCGACGCTCTGTTCCGAGAGCGTGCCC
CGGACCGCCAGCTCAGAACAGGGGCAGCCGTGTAGCCGAACGGAAGCTGGGAGCAGCCGGGACTGGTGGCCCCGCG
CCCGAGCTCCGCAGGCGGGAAGCACCTTGGATTTGGGAAGTCCCGGGAGCAGCGCGGCGGCACCTCCCTCACCCA
AGGGGCCGCGGCGACGGTCACGGGGCGCGGCCACCGTGAGCGACCCAGGCCAGGATTCTAAATAGACGGCCCCA
GGCTCCTCCTCCGCCCCGGGCGCCTCACCTGCGGGCATTGCCGCGCCGCTCCGCCGGTGTAGACGGCACCTGCG
CCGCTTGCTCGCGGGTCTCCGCCCTCGCCACCCTCACTGCGCCAGGCCAGGCAGCTCACCTGTACTGGCGC
GGGTGCGGAAGCCTGCGTGAGCCGAGGCGTTGAGGCGCGGCGCCACGCCACTGTCCCGAGAGGACGCAGGTGG
AGCGGGCGCGGCTTCGCGGAACCCGGCGCCGGCCGCGCAGTGGTCCCAGCCTACACCGGGTTCCGGGGACCCGG
CCGCCAGTGCCCGGGGAGTAGCCGCCCGCGTGGCTGGGCACCAATGAACAGCAGCAGCGCCAACATCACCTACGC
CAGTCGCAAGCGGCGGAAGCCGGTGCAGAAAACAGTAAAGCCAATCCCAGCTGAAGGAATCAAGTCAAATCCTTC
CAAGCGGCATAGAGACCGACTTAATACAGAGTTGGACCGTTTGGCTAGCCTGCTGCCTTTCCACAAGATGTTAT
TAATAAGTTGGACAAACTTTTCACTTCTTAGGCTCAGCGTCAGTTACCTGAGAGCCAAGAGCTTCTTTGATGTTGC
ATTAATACTCTCCCTACTGAAAGAAACGGAGGCCAGGATAACTGTAGAGCAGCAAATTTAGAGAAGGCCTGAA
CTTACAAGAAGGAGAATTCTTATTACAGGCTCTGAATGGCTTTGTATTAGTTGTACTACAGATGCTTTGGTCTT
TTATGCTTCTTCTACTATACAAGATTATCTAGGGTTTTCAGCAGTCTGATGTCATACATCAGAGTGTATATGAACT
TATCCATACCGAAGACCGAGCTGAATTTAGCGTCAGCTACACTGGGCATTAAATCCTTCTCAGTGTACAGAGTC
TGGACAAGGAATTGAAGAAGCCACTGGTCTCCCCAGACAGTAGTCTGTTATAACCCAGACCAGATTCCCTCCAGA
AACTCTCCTTTAATGGAGAGGTGCTTCATATGTCGTCTAAGGTGTCTGCTGGATAATTCATCTGGTTTTCTGGC
AATGAATTTCCAAGGGAAGTTAAAGTATCTTCATGGACAGAAAAAGAAAGGAAAGATGGATCAATACTTCCACC
TCAGTTGGCTTTGTTTGCATAGCTACTCCACTTCAGCCACCATCCATACTTGAAATCCGGACCAAAAATTTTAT
CTTTAGAACCAAAACACAACTAGACTTCACACCTATTGGTTGTGATGCCAAAGGAAGAATTGTTTTAGGATATAC
TGAAGCAGAGCTGTGCACGAGAGGCTCAGGTTATCAGTTTATTTCATGCAGCTGATATGCTTTATTGTGCCGAGTC
CCATATCCGAATGATTAAGACTGGAGAAAGTGGCATGATAGTTTTCCGGCTTCTTACAAAAACAACCGATGGAC
TTGGGTCCAGTCTAATGCACGCTGCTTTATAAAAATGGAAGACCAGATTATATCATTGTAACCTCAGAGACCACT
AACAGATGAGGAAGGAACAGAGCATTACGAAAACGAAATACGAAGTTGCCTTTTATGTTTACCCTGGAGAAGC
TGTGTTGTATGAGGCAACCAACCTTTTCTGCCATAATGGATCCCTTACCCTAAGGACTAAAAATGGCACTAG
TGGAAAAGACTCTGCTACCACATCCACTCTAAGCAAGGACTCTCTCAATCCTAGTTCCCTCCTGGCTGCCATGAT
GCAACAAGATGAGTCTATTTATCTCTATCCTGCTTCAAGTACTTCAAGTACTGCACCTTTTGAAAACAACCTTTT
CAACGAATCTATGAATGAATGCAGAAATTGGCAAGATAATACTGCACCGATGGGAAATGATACTATCCTGAAACA
TGAGCAAATTGACCAGCCTCAGGATGTGAACCTCATTGCTGGAGGTCACCCAGGGCTCTTTCAAGATAGTAAAAA
CAGTGACTTGTACAGCATAATGAAAAACCTAGGCATTGATTTTGAAGACATCAGACACATGCAGAATGAAAAATT
TTTCAGAAATGATTTTCTGGTGAGGTTGACTTCAGAGACATTGACTTAACGGATGAAATCCTGACGTATGTCCA
AGATTCTTTAAGTAAGTCTCCCTTCATACCTTCAGATTATCAACAGCAACAGTCCTTGGCTCTGAACTCAAGCTG
TATGGTACAGGAACACCTACATCTAGAACAGCAACAGCAACATCACCAAAAGCAAGTAGTAGTGGAGCCACAGCA
ACAGCTGTGTGTCAGAAGATGAAGCACATGCAAGTTAATGGCATGTTTGAAAATTGGAACTCTAACCAATTCTGTGCC
TTTCAATTGTCCACAGCAAGACCCACAACAATATAATGTCTTTACAGACTTACATGGGATCAGTCAAGAGTTCCC
CTACAAATCTGAAATGGATTCTATGCCTTATACACAGAACTTTATTTCTGTAAATCAGCCTGTATTACCACAACA
TTCCAAATGTACAGAGCTGGACTACCCTATGGGGAGTTTGAACCATCCCCATACCCCACTACTTCTAGTTTAGA
AGATTTTGTCACTTGTTTACAACCTCCTGAAAACCAAAAGCATGGATTAAATCCACAGTCAGCCATAATAACTCC
TCAGACATGTTATGCTGGGGCCGTGTCGATGTATCAGTGCCAGCCAGAACCTCAGCACACCCACGTGGGTGAGAT
GCAGTACAATCCAGTACTGCCAGGCCAACAGGCATTTTTAAACAAGTTTCAGAATGGAGTTTTAAATGAAACATA
TCCAGCTGAATTAATAACATAAATAACACTCAGACTACCACACATCTTCAGCCACTTCATCATCCGTGAGAAGC
CAGACCTTTTCTGATTTGACATCCAGTGGATTCTGTAAATCCAAGCCCAATTTTGACCTGGTTTTTGGATTA
AATTAGTTTGTGAAGGATTATGGAAAAATAAACTGTCACTGTTGGACGTCAGCAAGTTCACATGGAGGCATTGA
TGCATGCTATTACAAATTATTCCAAACCAATTTTAATTTTTGCTTTTAGAAAAGGGAGTTTAAAAATGGTATCA
AAATTACATATACTACAGTCAAGATAGAAAAGGTGCTGCCACGGAGTGGTGAGGTACCGTCTACATTTACATTA
TTCTGGGCACCACAAAATATACAAAACCTTTATCAGGGAACTAAGATTCTTTTAAATTAGAAAATATTCTCTATT
TGAATTATTTCTGTACAGTAAAAATAAAATACTTTGAGTTTTGAGCTACTGGATTCTTATTAGTTCCCCAAATA

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FIGURE 257B

CAAAGTTAGAGAACTAACTAGTTTTTCCTATCATGTTAACCTCTGCTTTTATCTCAGATGTTAAATAAATGGT
TTGGTGCTTTTTATAAAAAGATAATCTCAGTGCTTTCCTCCTTCACTGTTTCATCTAAGTGCCTCACATTTTTTT
CTACCTATAACACTCTAGGATGTATATTTTATATAAAGTATTCTTTTTCTTTTTTAAATTAATATCTTCTGCAC
ACAAATATTATTTGTGTTTCTTAAATCCAACCAATTTTCATTAATTCAGGCATATTTTAACTCCACTGCTTACCT
ACTTCTTCAGGTAAAAGGGCAAATAATGATCGAAAAAATAATTATTTATTACATAATTTAGTTGTTTCTAGACT
ATAAATGTTGCTATGTGCCTTATGTTGAAAAAATTTAAAGTAAATGCTTTTCCAAATTATTTCTTAATTATTA
TAAAAATATTAAGACAATAGCACTTAAATTCCTCAACAGTGTTTTTCAGAAGAAATAAATATACCACTCTTACCT
TTATTGATATCTCCATGATGATAGTTGAATGTTGCAATGTGAAAAATCTGCTGTTAACTGCAACCTTGTTTATTA
AATTGCAAGAAGCTTTATTTCTAGCTTTTTAATTAAGCAAAGCACCCATTTCAATGTGTATAAATTGTCTTTAAA
AACTGTTTTAGACCTATAATCCTTGATAATATATTGTGTTGACTTTATAAATTTGCTTCTTAGAACAGTGAAAA
CTATGTGTTTTTCTCATATTTGAGGAGTGTTAAGATTGCAGATAGCAAGGTTTGGTGCAAAGTATTGTAATGAGT
GAATTGAATGGTGCAATTGTATAGATATAATGAACAAAATTATTTGTAAGATATTTGCAGTTTTTCATTTTAAAAA
GTCCATACCTTATATATGCACCTTAATTTGTTGGGGCTTTACATACTTTATCAATGTGTCTTTCTAAGAAATCAAG
TAATGAATCCAAGCTGCTTAAAGTTGGTATTAATAAAAAAGACAACCACATAGTTCGTTTACCTTCAAACCTTAGGT
TTTTTTAATGATATACTGATCTTCATTACCAATAGGCAAAATTAATCACCTACCAACTTTACTGTCTAACATGG
ACTTTCAAAAAGAAAAAATGACACCATCTTTTATTCTTTTTTTTTTTTTTTTTTTTGGAGAGAGAGTCTTACTCTGC
CGCCCCAACTGGAGTGAGTGGCACAATCTTGGCTCACTGCAACCTCTACCTCCTGGGTTCAAGTGATTCTCTTG
CCTCAGCCTCCCGAGTTGCTGGGATTGCGGGCATGGTGGCGTGAGCCTGTAGTCCTAGCTACTCGGGAGGCTGAG
GCAGGAGAAATAGCCTGAACCTGGGAATCGGAGGTTGCAGGGCCAAGATCGCCCCACTGCACTCCAGCCTGGCAAT
AGACCGAGCTCCGTCTCCAAAAAATAACAATTTTATTCTTTTACTTTTTTTTAGTAAGTTAATGTATATA
AAAATGGCTTCGGACAAAATATCTCTGAGTTCTGTGATTTTCAGTCAAACTTTAAACCTGTAGAATCAATTTA
AGTGTGAAAAAATTTGTCTGAAACATTTTATAATTTGTTTCCAGCATGAGGTATCTAAGGATTTAGACCAGAG
GTCTAGATTAATACTCTATTTTTTACATTTAAACCTTTTATTATAAGTCTTACATAAACCATTTTTGTTACTCTCT
TCCACATGTTACTGGATAAATTGTTTAGTGAAAAATAGGCTTTTTAATCATGAATATGATGACAATCAGTTATAC
AGTTATAAAATTAAAAGTTTGAAAAGCAATATTGTATATTTTATCTATATAAAATAACTAAAATGTATCTAAGA
ATAATAAAATCACGTAAACC

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FIGURE 258

MNSSSANITYASRKRKRPVQKTVKPIPAEGIKSNPSKRHRDRLNTELDRLASLLPFPQDVINKLDKLSVLRLSVS
YLRAKSFFDVALKSSPTERNGGQDNCRAANFREGLNLQEGEFLLQALNGFVLVVTTDALVFYASSTIQDYLGFAQQ
SDVIHQSVYELIHTEDRAEFQRQLHWALNPSQCTESGQGIEEATGLPQTVVCYNPDQIPPENSPLMERCFCICRLR
CLLDNSSGFLAMNFQGKLKYLHGQKKKGKDGSIPLPQLALFAIATPLQPPSILEIRTKNFIFRTKHKLDFTPIGC
DAKGRIVLGYTEAELCTRGSGYQFIHAADMLYCAESHIRMIKTGESGMIVFRLLTKNNRWTWVQSNARLLYKNGR
PDYIIIVTQRPLTDEEGTEHLRKRNTKLPFMFTTGEAVLYEATNPFPAIMDPLPLRTKNGTSGKDSATTSTLSKDS
LNPSSLLAAMMQQDESIYLYPASSTSSSTAPFENFFNESMNECRNWQDNTAPMGNDTILKHEQIDQPQDVNSFAG
GHPGLFQDSKNSDLYSIMKNLGIDFEDIRHMQNEKFFRNDFSGEVDFRDIDLTDEILTYVQDSLSKSPFIPSDYQ
QQQSLALNSSCMVQEHLEQQQQHHQKQVVVEPQQQLCQKMKHMQVNGMFENWNSNQFVPFNCPPQDPQQYNVF
TDLHGISOEFYKSEMDSMPTQNFISCNQPVLPQHSKCTELDYPMGSFEPSPYPTTSSLEDFVTCLQLPENQKH
GLNPQSAIITPQTCYAGAVSMYQCQPEPQHETHVGQMQYNPVLPGQQAFLNKFQNGVLNETYPAELNNINNTQTTT
HLQPLHHPSEARFPDLTSSGFL

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FIGURE 259

AGCTGGCTGAGAGGGGACTGGGCGCCGGCGGGGAAGGAGGAGCGCTAGGTCGGTGTACGACCGAGATTAGGGTGC
GTGCCAGCTCCGGGAGGCCGCGGTGAGGGGCCGGGCCAAGCTGCCGACCCGAGCCGATCGTCAGGGTCGCCAGC
GCCTCAGCTCTGTGGAGGAGCAGCAGTAGTCGGAGGGTGCAGGATATTAGAAATGGCTACTCCCCAGTCAATTTT
CATCTTTGCAATCTGCATTTTAAATGATAACAGAATTAATTCTGGCCTCAAAAAGCTACTATGATATCTTAGGTGT
GCCAAATCGGCATCAGAGCGCCAAATCAAGAAGGCCTTTCACAAGTTGGCCATGAAGTACCACCTGACAAAA
TAAGAGCCCGGATGCTGAAGCAAAATTCAGAGAGATTGCAGAAGCATATGAAACACTCTCAGATGCTAATAGACG
AAAAGAGTATGATACACTTGGACACAGTGCTTTTACTAGTGGTAAAGGACAAAGAGGTAGTGGAAGTCTTTTGA
GCAGTCATTTAACTTCAATTTTGATGACTTATTTAAAGACTTTGGCTTTTTTGGTCAAAACCAAAACACTGGATC
CAAGAAGCGTTTTGAAAATCATTTCCAGACACGCCAGGATGGTGGTTCCAGTAGACAAAGGCATCATTCCAAGA
ATTTTCTTTTGGAGGTGGATTATTTGATGACATGTTTGAAGATATGGAGAAAATGTTTTCTTTTAGTGGTTTTGA
CTCTACCAATCAGCATACAGTACAGACTGAAAATAGATTTTCATGGATCTAGCAAGCACTGCAGGACTGTCACCTCA
ACGAAGAGGAAATATGGTTACTACATACACTGACTGTTCCAGGACAGTAGTTCTTATTCTATTCTCACTAAATCCA
ACTGGTTGACTCTTCCTCATTATCTTTGATGCTAAACAATTTTCTGTGAACATTTTTGACAAGTGCATGATTTCA
CTTTAAACAATTTGATATAGCTATTAAATATATTTAAGGGTTTTTTTTTTTTTGACAAATTCAACATTCAACGAGT
AGACAAAATGCTAATTATTTCCCTGATTAGGAAAGTTTCTTTAAAAACACGTAATTTTGCTAGTGCTTTTTCT
CTACCTGCCCTTGGGCTCACTAATATCACCAGTATTATTACCAAGAAAATATTGAGTTTACCTGATTAACTTTA
AAAGTTAATTGTAGATTTAAATTGTGTGAACCTAATGATTTTTGCAGTGAAACCTTTACTAATTCAAAGTTGCAT
GTTCTATGACATCTGTGACTTGCGTTGCAGAGTGATCATGAACTGTATAATTGAGTCATTTCAGTAAAGGAGAAC
AGTATCTTGGTTAATTGCTACTGAAAGGTTGAGAAAGGAATGGTTTGATATTTACCACAGCGCTGTGCCTTTCTA
CAGTAGAACTGGGGTAAAGGAAATGGTTTTATTGCCCATAGTCATTTAGGCTGGAAAAAGTTGAAAACCTTAACG
AAATATTGCCAAGAGATTGTTATGTGTTTGGTTCCAGCCTAAAAATGATTTTGTAGTGTTGAAATCATAGCTACT
TACATAGCTTTTTTCATATTTCTTTCTTAGTTGTTGGCACTCTTAGGTCTTAGTATGGATTTATGTGTTTGTGTGT
GTGTAGTTTATCCTCTCTCTCATCTTTATCTAGAGATTGACTGATACCTCATTCTGTTTGTAACCAGCCAGTA
ATTTCTGTGCAACCTTACTATGTGCAATATTTTAAATCCTGAGAAATGTGTGCTTTTGTTTTCGGATAGACTTA
TTTCTTTAGTTCTGCACTTTTCCACATTATACTCCATATGAGTATTAATCCTATGGATACATATTAACAAGTG
TCTCATACAACATTGTATGTGAGAGAAATATAAATATTTACAACCTGATATTCGTTGTTGTTTATTGTTAAAG
TTTATTATGCAACTCTGGAGGTATAGAGGGCATATAAGCTATGGGACATATGCTGATCACAGGCTATATTTCATGA
AGTTACTTTTGACCAACCTGAAAACCTGATAGGATTTTGTGTTGTCATTTGGTAATTTCTACTGCATTCTTACCATC
CTTCTCTCACAATTTTGATAGCTTGAAGATCTTTTTAATTATAATTTGTTGTATTTGTTTCCCTAGGAGCAAGT
GTTCTGCTGCCAGTTCTTTCTCTTTAGGCGTGGTTGAGAAAAAGCAGAACTTTACATAAAGCTGTATTTCTT
AATCATCTTTAATTTGAAACTTAAGAAAATGAATTTATTCTGTTATATTTATGTAACCTTATTTCCCTGGAAGTTAT
ATCTACTAGTTTTGTTTGATAATAATAAATTAGCTATACCTTGAA

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FIGURE 260

MATPQSIFIFAICILMITELILASKSYDILGVPKSASERQIKKAFHKLAMKYHPDKNKSPDAEAKFREIAEAYE
TLSDANRRKEYDTLGHSAFTSGKGQRGSGSSFEQSFNFNFDLFDKDFGFFGQNQNTGSKKRFENHFQTRQDGGSS
RQRHHFQEFSTFGGGLFDDMFEDMEKMFSFSGFDSTNQHTVQTENRFHGSSKHCRVTQRRGNMVTITYTDCSGQ

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FIGURE 261

AGGAAATGGTTTCTGGAACCGTTAGTAAGGTCAGTTTTTAAACACTGAATCCAAGGTTGTCTTCTGGAATATCC
AAATTGGTTATGACCAGAAATGTGATTCATTATACTAAGCTAAAGGAATAGATTAAAGAATTAGCAACAGTGGCCG
GGTGAGTGGCTCATGCCTGTAACCCAGCACTTTGGGGGAGGCCAGGTGGGTGGATCATTGAGGTGAGGAGT
TTGAGACCAGCCTGGCCAAACATGGTGAAACCTAAAAATACAAAAATTAGCCAGGTGTGGTGGCAGGTGCTTGTA
TCCCAGCTGCTTGGGAGGCTGAAGCAGGAGAATTGCTTGAACCCGAGGCAGGGGTTGCAGTGAGCCAAGATCAC
ACCATTGCACTCCAGCCTGGGTGGCAGAGTGAGACTCTGTCTCAAAAATTAAAAAGCAACAGTGTATATGCAATA
GTTGCAAGATGTAAGATCACCCAAAGAGTATGCAGAGGGAAATGAGGGACAGAACCAGAAATATTAATACCCAG
GGAGTGAAACAGGAGGAGGACCCCAAGAAGTTACTGAGTCAGATTTTTCCCACTCATCCAGGTGAAAGTTTAGGTC
AATAATGTGAAATACCAGAGGGATTAAATGTCTACAGAAATAAAACCATGTCTCACATTAAGACAAACAAGTAGG
TTGGAGGGATATTTTGAAGGCAAGGTGATATTAACTTTATTCTGAAAGTAGTTTGTAGAGAAAGAGGCATGA
TAAGAGTTGCAGTTAACTGATTGGAACTATGCAGCAGATGAACTGGAATAAAGGAACTCATCAGGAAATGAT
TATAGTAATAAGGGCCAGAAATAAGGGCTTGCTTGCTGAACTAAAAACAAAGAGGATACAAAGGTTCTAGAAAT
ATTTCAAAGGAATTAGCTTTAATTCAGCAATACTCATTGAGAATCACCTATGCACCTGGCTCTGAAGATGAAGTG
CTGAGTAACTTAGACATGGACCCTGCTATCATGGAGATGGCAGATTATTGGTCAGAATGCTCTTACCTGTCAAT
GTAGCAATTTTGTAGATCCTTAATACCTCTGAATTGCTAATAAACTTGTTTTGGCTGAAAAAATAGTCCTGTGA
ATTTTACCATGCAGTTAAATAAGAACTAAAAGCAAACCTAAATACCACCAAAAAGGTTAGTAGTCTGTTATATG
CATTAGCCTTAATCTAAGGAAATATTTTATTATAGGTCTCCTTGAAGAAAATGATATTTTCAGGAATGCTCAAGC
AGGTGTTCTCATCAGCACTAATAGTCATCCAATCTTAAGGAAAAACAGAATATTTGATGGATTGCGCAGGTAT
TGAAATTACAAATCACGCAACTGCAACACTAGAAGGCAATCAGATTTTTAACAACCGGTTTGGAGGCTTATTTTT
AGCATCTGGTGTTAATGTGACAATGAAAGATAACAAAATAATGAACAATCAAGATGCCATAGAAAAGGCTGTTAG
TAGAGGCCAATGTTTATATAAAATATCAAGTTATACCAGCTATCCCATGCATGATTCTACAGATGTCATACTTG
TAACACCACAGATCGAAATGCCATATGTGTGAAGTGCATTAAAGAAAGTGCCATCAGGGACATGATGTAGAGTTTAT
TAGACATGATAGGTATGTAGCACACTTGCTTGATATATTACCCAATTACTTTCCCCCTCACTTTTCTAATATTTG
GGTTTCATTTTGCTTTAGGTTTTTCTGTGACTGTGGTGCTGGAACACTGTCTAATCCTTGTACATTAGCTGGTGA
GCCTACACATGATACAGATACACTATATGACTCTGCTCCACCTATAGAATCTAATACATTGCAGCACAACTGAAT
TCCTTCCCTAAAGAAAAAGTCCCTGCCATTGTAACATCATAACTTAAACACTTTTTTGAAGAAAGATTTAAATA
TTTGCCCATGCTACAGGAAGAGACTGTATTAAAAATGGATACACAAGGTCAGTTGACACTATGAAGCTCAAGCTA
CCAAAAAGAAAGTGGCAATATATTGACTCAGGATCTCAAAGCTGGGTGTTTTAGCATTACTGTGTAAAGACTTGA
AGGGACAGAAAGTGAAGAAAATAAGCTGCAATTTTGTACAGATACCAACTTCTGAAAAGCTGGTGTTTTTTACA
AGCATTGAATGCAGTCCAATTTGCAGTAGTAATCTTCAATAGACAAGCAGCTTTGTTGCTGCCTTTATGGACATG
GGTACCAATTGCTTTTGTAAATATGGTAAAAATGTGAGCTAGCACTTCTGCGTTCCTTTTGATTTTTTTTTTTTAA
CATGTATTGAGATTGAGAAATATGATTTTAAATGCCTTAATCTCATGTAGTTTGTTTTTAATTTCAAGCAAAATCT
TACTGTACTTGAATGTGCCCTGTTTTGTTAGCACACCTAGACTTGCTGTAAGTGTACTCATGTCCAGTATGTAC
GTTCTTTCTATGAAAGAGAAAACACTAATCTTAAATTATATCCAGCAATGTTTCTGGTATCCTTTAAGAAAAGTT
AAGACTATTATTTCCCTTCCCTTCCCTGTGCAGCATTCAAAAATCACCCCTAGAAAAAGTGAGTGTTTTAAAGAGA
CTTCTAGGAAGGGATGCACTGTAAAACAAAAGTATTCTTGTAAGTCAAGTTTGTGAAAGGTAAAAAACTACTAT
GTTTTAAGTACACTTTAGAAAGTCTCTTCAAAAACAAACAGTCTGTATTGAACTCTGTTTCATAGTTTTTTTTTG
AACAGTTTAGACAAAACCTGTTGGAAATTAACCAATTTCTGCATTAAAGCTGAGACAAGTATATAAACAGCCCTA
TACAGTTTCATAGCTTTTCCCTCCCCATTTATGTGTATTGGTGACAGTGGGTATAAAACAGCCTGAAAGTGTATG
CATGTACCATAACATTTAGACTTAATATATTGTGGAGTATTCAATAACCATTATGTAGAAGGTAGATAAGAATTA
AAAGGGTTTAAATTTCTAGAAAGAAAATGGAAAAATGGTCATTTTTAAAAAATAAAGTTTATTAGATCATAATGT
TGTCTGAATTTACCACCTTTGTGAGAAGTCAACTCAAAGCTTCCAATGTAGTCAGTCTATAATTCCTTAATCAA
GTCAGCAATTTATGGACAGCTTCAGCATTTACAGTTGACCTTTCACTAGCCAGGCAAACTTCCCTTAAATTA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 262

MKDNKIMNNQDAIEKAVSRGQCLYKISSYTSYPMHDFYRCHTCNTTDRNAICVNCIKKCHQGHDFEIRHdryva
HLLDILPNYFPPHFSNIWVSFCFRFFCDGAGTILSNPCTLAGEPTHDTDTLYDSAPPIESNTLQHN

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FIGURE 263

CGCGCCCTCCCTCCTCGCGGACCTGGCGGTGCCGGCGCCCGGAGTGGCCCTTTAAAAGGCAGCTTATTGTCCGG
AGGGGGCGGGCGGGGGCGCCGACCGCGGCCTGAGGCCCCGCCCTCCCTCTCCCTCCCTCTGTCCCCGCGTCG
CTCGCTGGCTAGCTCGCTGGCTCGCTCGCCGTCGGCGCACGCTCCGCCTCCGTCAGTTGGCTCCGCTGTCCGG
TGCGCGCGTGGAGCGGCAGCCGGTCTGGACGCGCGGCCGGGGCTGGGGGCTGGGAGCGCGGCGCGCAAGATCTC
CCCGCGGAGAGCGGCCCTGCCACCGGGCGAGGCCTGCGCCGCGATGCGCAGAGATGGGCAGTAAAGGGGTGACG
GCGGGAAGATCGCCAGCAACGTGCAGAAGAAGCTCACCCGCGCGCAGGAGAAGGTTCTCCAGAAGCTGGGGAAG
GCAGATGAGACCAAGGATGAGCAGTTTGAGCAGTGGCTCCAGAATTTCAACAAGCAGCTGACGGAGGGCACCCGG
CTGCAGAAGGATCTCCGGACCTACCTGGCCTCCGTCAAAGCCATGCACGAGGCTTCCAAGAAGCTGAATGAGTGT
CTGCAGGAGGTGTATGAGCCCGATTGGCCCCGAGGGATGAGGCAACAAGATCGCAGAGAACAACGACCTGCTG
TGGATGGATTACCACCAGAAGCTGGTGGACCAGGCGCTGCTGACCATGGACACGTACCTGGGCCAGTTCCCCGAC
ATCAAGTCACGCATTGCCAAGCGGGGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACTACGAGTCCCTT
CAAAGTCCCAAAAAGAAGGATGAAGCCAAAATTGCCAAGGCCGAGGAGGAGCTCATCAAAGCCCAGAAGGTGTTT
GAGGAGATGAATGTGGATCTGCAGGAGGAGCTGCCGTCCCTGTGGAACAGCCGCGTAGGTTTCTACGTCAACACG
TTCCAGAGCATCGCGGGCCTGGAGGAAAATTCCACAAGGAGATGAGCAAGCTCAACCAGAACCTCAATGATGTG
CTGGTGGCCTGGAGAAGCAACACGGGAGCAACACCTTCACGGTCAAGGCCAGCCCAGAAAGAAAAGTAAACTG
TTTTGCGGCTGCGCAGAAAGAAGAACAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCTCCAGAT
GGTCCCTGCCGCCACCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCCCGGGGCC
ACCTCCCAAGTCCCATCTCAGCCAGCAGAGCCCTCGGAGGTGGCGGGTGGGACCAACCTGCGGCTGGAGCC
CAGGAGCCAGGGGAGACGGCGGCAAGTGAAGCAGCCTCCAGCTCTCTCCTGCTGTCTGTGGTGGAGACCTTCCCA
GCAACTGTGAATGGCACCGTGGAGGGCGGAGTGGGGCCGGGCGCTTGACCTGCCCCAGGTTTCATGTTCAAG
GTACAGGCCCAGCACGACTACACGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGTGTGGTGTGGTG
ATCCCTTCCAGAACCCTGAAGAGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCAC
AAGGAGCTGGAGAAGTGCCGTGGCGTCTTCCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGC
AGCCTCCGGGCGTGTGAAGAACACCTCCTCCCGAAAAATGTGTGGTTCTTTTTTTGTGTTTTGTTTTTCA
TCTTTTGAAGAGCAAAGGGAAATCAAGAGGAGACCCCAAGCAGAGGGGCGTTCCTCCAAAGATTAGGTCGTTTT
CCAAAGAGCCGCGTCCCGGCAAGTCCGGCGGAATTCACAGTGTTTCTGAAGCTGCTGTGTCTCTAGTTGAGTT
TCTGGCGCCCTGCCGTGTGCCGCGATGTGTGCCTGGCCGAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTT
GCCTGAAGCTTCGGCCGCGCCACCCGGGCAAGGGTCTCTTTTCTTGGCAGCTGCTGTGGGTGGGGCCAGACAC
CAGCTAGCCTGGCTCTGCCCCGAGACGGTCTGTGTGCTGTTTGAATAAATCTTAGTGTTCAAAACAAAATG
AAACAAAAAAAATGATAAAACTCTCAAAAAA

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FIGURE 264

MAEMGSKGVTAGKIASNVQKKLTRAQEKVLQKLGKADETKDEQFEQCVQNFNKQLTEGTRLQKDLRTYLASVKAM
HEASKKLNECLQEVYEPDWPGRDEANKIAENNDLLWMDYHQKLVDQALLTMDTYLGQFPDIKSRIAKRGRKLVDY
DSARHHYESLQTAKKKDEAKIAKEEELIKAQKVFEEMNVDLQEELPSLWNSRVGFYVNTFQSIAGLEENFHKEM
SKLNQNLNDVLVGLEKQHGSNTFTVKAQPSDNAPAKGNKSPSPPDGSPAATPEIRVNHEPEPAGGATPGATLPKS
PSQSSLPVVVETFPATVNGTVEGGSGAGRLDLPPGFMFKVQAQHDYTATDTDELQLKAGDVVLVIPFQNPPEEQD
EGWLMGVKESDWNQHKELEKCRGVFPENF TERVP

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FIGURE 265A

AGATTTGATAATGGGCTGCATTAAAAGTAAAGAAAACAAAAGTCCAGCCATTAAATACAGACCTGAAAATACTCC
AGAGCCTGTCTAGTACAAGTGTGAGCCATTATGGAGCAGAACCCACTACAGTGTACCATGTCCGTCATCTTCAGC
AAAGGGAACAGCAGTTAATTTTCAGCAGTCTTTCCATGACACCATTGGAGGATCCTCAGGGGTAACGCCCTTTTGG
AGGTGCATCTTCCTCATTTTCAGTGGTGCCAAGTTCATATCCTGCTGGTTTAACAGGTGGTGTTACTATATTTGT
GGCCTTATATGATTATGAAGCTAGAAGTACAGAAGACCTTTTCAATTAAGAAGGGTGAAAGATTTCAAATAATTAA
CAATACGGAAGGAGATTGGTGGGAAGCAAGATCAATCGCTACAGGAAAGAATGGTTATATCCCGAGCAATTATGT
AGCGCCTGCAGATTCCATTTCAGGCAGAAGAATGGTATTTTGGCAAATGGGGAGAAAAGATGCTGAAAGATTACT
TTTGAATCCTGGAAATCAACGAGGTATTTTCTTAGTAAGAGAGAGTGAAACAATAAGGTGCTTATTCCCTTTC
TATTCGTGATTGGGATGAGATAAGGGGTGACAATGTGAAACACTACAAAATTAGGAAACTTGACAATGGTGGATA
CTATATCACACCAGAGCACAAATTTGATACTCTGCAGAAATTGGTGAAACACTACACAGAACATGCTGATGGTTT
ATGCCACAAGTTGACAACCTGTGTGTCCAACCTGCAGACTCAAGGTCTAGCAAAAAGATGCTTGGGAAAT
CCCTCGAGAATCTTTGCGACTAGAGGTTAACTAGGACAAGGATGTTTTCGGCGAAGTGTGGATGGGAACATGGAA
TGGAACCACGAAAGTAGCAATCAAAACACTAAAACCAGGTACAATGATGCCAGAAGCTTTCCTTCAAGAAGCTCA
GATAATGAAAAAATTAAGACATGATAAACTTGTTCCTACTATATGCTGTTGTTTCTGAAGAACCAATTTACATTGT
CACTGAATTTATGTCAAAAGGAAGCTTATTAGATTTCTTAAAGGAAGGAGATGGAAAGTATTTGAAGCTTCCACA
GCTGGTTGATATGGCTGCTCAGATTGCTGATGGTATGGCATATATTGAAAGAATGAACTATATTCACCGAGATCT
TCGGGCTGCTAATATTCTTGTAGGAGAAAATCTTGTGTGCAAAATAGCAGACTTTGGTTTAGCAAGGTTAATTGA
AGACAATGAATACACAGCAAGACAAGGTGCAAAATTTCCAATCAAATGGACAGCTCCTGAAGCTGCACGTGTATGG
TCGGTTTACAATAAAGTCTGATGTCTGGTCATTGGAATCTGCAAAACAGAACTAGTAACAAAGGGCCGAGTGCC
ATATCCAGGTATGGTGAACCGTGAAGTACTAGAACAAGTGGAGCGAGGATACAGGATGCCGTGCCCTCAGGGCTG
TCCAGAATCCCTCCATGAATTGATGAATCTGTGTTGGAAGAAGGACCCTGATGAAAGACCAACATTTGAATATAT
TCAGTCTTCTTGAAGACTACTTCACTGCTACAGAGCCACAGTACCAGCCAGGAGAAAAATTTATTAATTCAGTA
GCCTATTTTATATGCACAAATCTGCCAAAATATAAAGAACTTGTGTAGATTTTCTACAGGAATCAAAAGAAGAAA
ATCTTCTTTACTCTGCATGTTTTTAATGGTAACTGGAATCCCAGATATGGTTGCACAAAACCACTTTTTTTTCC
CCAAGTATTAACTCTAATGTACCAATGATGAATTTATCAGCGTATTTTCAGGGTCCAAACAAAATAGAGCTAAGA
TACTGATGACAGTGTGGGTGACAGCATGGTAATGAAGGACAGTGAGGCTCCTGCTTATTTATAAATCATTTCCTT
TCTTTTTTTCCCAAAGTCAGAAATTGCTCAAAGAAAATTATTTATTGTTACAGATAAACTTGAGAGATAAAAAG
CTATACCATAATAAAATCTAAATTAAGGAATATCATGGGACCAAATAATTCCATTCCAGTTTTTTAAAGTTTCT
TGCATTTATTATTCTCAAAAGTTTTTTCTAAGTTAAACAGTCAGTATGCAATCTTAATATATGCTTTCTTTTGCA
TGGACATGGGCCAGGTTTTTCAAAGGAATATAAACAGGATCTCAAACCTTGATTAAATGTTAGACCACAGAAGTG
GAATTTGAAAGTATAATGCAGTACATTAATATTTCATGTTTCATGGAACCTGAAAGAATAAGAATTTTTCACTTCAG
TCCTTTTCTGAAGAGTTTGACTTAGAATAATGAAGGTAAC TAGAAAGTGAGTTAATCTTGTATGAGGTTGCATTG
ATTTTTTAAGGCAATATATAATTGAACTACTGTCCAATCAAAGGGGAAATGTTTGTATCTTTAGATAGCATGCA
AAGTAAGACCCAGCATTTTTAAAGCCCTTTTTTAAAACTAGACTTCGTACTGTGAGTATTGCTTATATGTCCTTA
TGGGGATGGGTGCCACAAATAGAAAATATGACCAGATCAGGGACTTGAATGCACTTTTGCTCATGGTGAATATAG
ATGAACAGAGAGGAAAATGTATTTAAAGAAATACGAGAAAAGAAAATGTGAAAGTTTACAAGTTAGAGGGATG
GAAGGTAATGTTTAAATGTTGATGTCATGGAGTGACAGAATGGCTTTGCTGGCACTCAGAGCTCCTCACTTAGCTA
TATTCTGAGACTTTGAAGAGTTATAAAGTATAACTATAAACTAATTTTTCTTACACACTAAATGGGTATTTGTT
CAAAATAATGAAGTTATGGCTTCACATTCATTGTCAGTGGGATATGGTTTTATGTAAACATTTTTTAGAACTCCA
GTTTTCAAATCATGTTTGAATCTACATTCATTTTTTTTTGTTTTCTTTTTTGAGACGGAGTCTCGCTCTGCCGCC
CAGGCTGGAGTGACGTGGCGGATCTCGGCTCACTGCAAGCTCTGCCTCCAGGTTACACCATTCCTCTGCCTC
AGCCTCCCGAGTAGCTGGGACTACAGGTGCCACCACCACGCCTGGCTAGTTTTTTGTATTTTTTAGTAGAGACGC
AGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCCCGCTCGGCCCTCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCAGCCTACATTCATTTCTAAAGTCTATGTAATGGTGGTCATTTTTTCC
CTTTTAGAATACATTAAATGGTTGATTTGGGGAGGAAAATTTATCTGAATATTAACGGTGGTGAAAAGGGGACA
GTTTTTACCCTAAAGTGCAAAAGTGAAACATACAAAATAAGACTAATTTTTTAAGAGTAACTCAGTAATTTCAAAA
TACAGATTTGAATAGCAGCATTAGTGGTTTGTAGTGTCTAGCAAAGGAAAAATGATGAATAAAATGAAGGTCTGG
TGTATATGTTTTAAAAATACTCTCATATAGTCACACTTTAAATTAAGCCTTATATTAGGCCCTCTATTTTCAGGA

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FIGURE 265B

TATAATTCTTAACTATCATTATTTACCTGATTTTAAATCATCAGATTCGAAATTCTGTGCCATGGCGTATATGTTT
AAATTCAAACCATTTTTTAAAATGTGAAGATGGACTTCATGCAAGTTGGCAGTGGTTCTGGTACTAAAAATTGTGG
TTGTTTTTTCTGTTTACGTAACTGCTTAGTATTGACACTCTCTACCAAGAGGGTCTTCCTAAGAAGAGTGCTGT
CATTATTTCTCTTATCAACAACCTTGTGACATGAGATTTTTTAAAGGGCTTTATGTGAACCTATGATATTGTAATTT
TTCTAAGCATATTCAAAGGGTGACAAAATTACGTTTATGTACTAAATCTAATCAGGAAAGTAAGGCAGGAAAAG
TTGATGGTATTCATTAGGTTTTAACTGAATGGAGCAGTTCCTTATATAATAACAATTGTATAGTAGGGATAAAAC
ACTAACTTAATGTGTATTCATTTTAAATTGTTCTGTATTTTTAAATTGCCAAGAAAAACAACTTTGTAAATTTGG
AGATATTTTCCAACAGCTTTTCGTCTTCAGTGTCTTAATGTGGAAGTTAACCCCTACCAAAAAAGGAAGTTGGCA
AAAACAGCCTTCTAGCACACTTTTTTAAATGAATAATGGTAGCCTAACTTAATATTTTTATAAAGTATTGTAAT
ATTGTTTTGTGGATAATTGAAATAAAAAGTTCTCATTGAATGCACCTATTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 266

MGCIKSKENKSPAICYRPENTPEPVSTSVSHYGAEP TTVSPCPSSSAKGTAVNFSSLSMTPFGGSSGVTPFGGAS
SSFSVVPSSYPAGLTGGVTIFVALYDYEARTTEDLSFKKGERFQIINNTEGDWWEARS IATGKNGYIPSNYVAPA
DSIQAE EWYFGKMGRKDAERLLL NPGNQRGIFLVRESE TTKGAYSL SIRDWDEIRGDNVKHYKIRKLDNGGYYIT
TRAQFD TLQKLVKHYTEHADGLCHKLT TVCPTVKPQTQGLAKDAWEIPRESLRLEV KLGQGC FGEVWMGTWNGTT
KVAIKTLKPGTMMPEAF LQEAQIMKKLRHDKLVPLYAVVSEEP IYIVTEFMSKGSLLDFLKEGDGKYLKLPQLVD
MAAQIADGMAYIERMNYIHRDLRAANILVGENLVCKIADFGLARLIEDNEYTARQGA KFP IKWTAPEAALYGRFT
IKSDVWSFGILQTELVTKGRVPYPGMVNREVLEQVERGYRMPCPQGCPESLHELMNLCWKKDPDERPTFEYIQSF
LEDYFTATEPQYQPGENL

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FIGURE 267A

AGATTGTTGATAATGGGCTGCATTAAAGTAAAGAAAAACAAAAGTCCAGCCATTAAATACAGACCTGAAAATACCTCC
AGAGCCTGTCAGTACAAGTGTGAGCCATTATGGAGCAGAACCCACTACAGTGTACCATGTCCGTCATCTTCAGC
AAAGGGAACAGCAGTTAATTTTCAGCAGTCTTTCCATGACACCATTTGGAGGATCCTCAGGGGTAAACGCCTTTTGG
AGGTGCATCTTCCCTCATTTTTCAGTGGTGCCAAGTTTCATATCCTGCTGGTTTAAACAGGTGGTGTACTATATTTGT
GGCCTTATATGATTATGAAGCTAGAACTACAGAAGACCTTTTCATTTAAGAAGGGTGAAAGATTTCAAAATAATTAA
CAATACGGAAGGAGATTGGTGGGAAGCAAGATCAATCGCTACAGGAAAGAATGGTTATATCCCGAGCAATTATGT
AGCGCCTGCAGATTCCATTACAGGCAGAAGAATGGTATTTTGGCAAAATGGGGAGAAAAGATGCTGAAAGATTACT
TTTGAATCCTGGAAATCAACGAGGTATTTTCTTAGTAAGAGAGAGTGAAACAACATAAAGGTGCTTATTCCCTTTT
TATTCGTGATTGGGATGAGATAAGGGGTGACAATGTGAAACACTACAAAATTAGGAACTTGACAATGGTGGGATA
CTATATCACAAACCAGAGCACAAATTTGATACTCTGCAGAAATTGGTGAAACACTACACAGAACATGCTGATGGTTT
ATGCCACAAGTTGACAACCTGTGTGTCCAACCTGCAGACTCAAGGTCTAGCAAAAGATGCTTGGGAAAT
CCCTCGAGAATCTTTGCGACTAGAGGTTAAACTAGGACAAGGATGTTTTCGGCGAAGTGTGGATGGGAACATGGAA
TGGAACCACGAAAGTAGCAATCAAAACACTAAAACCAGGTACAATGATGCCAGAAGCTTTCTTCAAGAAGCTCA
GATAATGAAAAAATTAAGACATGATAAACTTGTTCCTACTATATGCTGTTGTTTTCTGAAGAACCAATTTACATTGT
CACTGAATTTATGTCAAAAGGAAGCTTATTAGATTTCTTAAAGGAAGGAGATGGAAAGTATTTGAAGCTTCCACA
GCTGGTTGATATGGCTGCTCAGATTGCTGATGGTATGGCATATATTGAAAGAATGAACATATTACCGAGATCT
TCGGGCTGCTAATATTCTTGTAGGAGAAAATCTTGTGTGCAAAATAGCAGACTTTGGTTTGTAGCAAGGTTAATTGA
AGACAATGAATACACAGCAAGACAAGGTGCAAAATTTCCAATCAAATGGACAGCTCCTGAAGCTGCACTGTATGG
TCGGTTTACAATAAAGTCTGATGTCTGGTCATTGGAATCTGCAAAACAGAACTAGTAACAAAGGGCCGAGTGCC
ATATCCAGGTATGGTGAACCGTGAAGTACTAGAACAAGTGGAGCGAGGATACAGGATGCCGTGCCCTCAGGGCTG
TCCAGAATCCCTCCATGAATTGATGAATCTGTGTTGGAAGAAGGACCCTGATGAAAGACCAACATTTGAATATAT
TCAGTCCCTTCTTGAAGACTACTTCACTGCTACAGAGCCACAGTACCAGCCAGGAGAAAATTTATTAATTCAAGTA
GCCTATTTTATATGCACAAATCTGCCAAAATATAAAGAAGTGTGTAGATTTTCTACAGGAATCAAAAGAAGAAA
ATCTTCTTTACTCTGCATGTTTTTAATGGTAACTGGAATCCAGATATGGTTGCACAAAACCACTTTTTTTTCC
CCAAGTATTAACCTCTAATGTACCAATGATGAATTTATCAGCGTATTTTCAGGGTCCAAACAAAATAGAGCTAAGA
TACTGATGACAGTGTGGGTGACAGCATGGTAATGAAGGACAGTGAGGCTCCTGCTTATTTATAAATCATTTTCCTT
TCTTTTTTTTCCCCAAAGTCAGAATTGCTCAAAAGAAAATTTATTTATTGTTACAGATAAACTTGAGAGATAAAAAG
CTATACCATAATAAAATCTAAAATTAAGGAATATCATGGGACCAATAATTCCATTCCAGTTTTTTTAAAGTTTCT
TGCATTTATTATTCTCAAAAGTTTTTTCTAAGTTAAACAGTCAGTATGCAATCTTAATATATGCTTTCTTTTGCA
TGGACATGGGCCAGGTTTTTCAAAAGGAATATAAACAGGATCTCAAACCTGATTAAATGTTAGACCACAGAAGTG
GAATTTGAAAGTATAATGCAGTACATTAATATTTCATGTTTCATGGAACCTGAAAGAATAAGAACTTTTTCACTTCAG
TCCTTTTTCTGAAGAGTTTGACTTAGAATAATGAAGGTAAGTAAAGTGAAGTAAATCTTGTATGAGGTTGCATTG
ATTTTTTAAAGCAATATATAAATTGAAACTACTGTCCAATCAAAGGGGAAATGTTTTGATCTTTAGATAGCATGCA
AAGTAAGACCCAGCATTTTTAAAGCCCTTTTTTAAAACTAGACTTCGTACTGTGAGTATTGCTTATATGTCCTTA
TGGGGATGGGTGCCACAAATAGAAAATATGACCAGATCAGGGACTTGAATGCACTTTTGCTCATGGTGAATATAG
ATGAACAGAGAGGAAAATGTATTTTAAAGAAATACGAGAAAAGAAAATGTGAAAGTTTTTACAAGTTAGAGGGATG
GAAGGTAATGTTTTAATGTTGATGTATGGAGTGACAGAATGGCTTTGCTGGCACTCAGAGCTCCTCACTTAGCTA
TATTCTGAGACTTTGAAGAGTTATAAAGTATAACTATAAACTAATTTTTCTTACACACTAAATGGGTATTTGTT
CAAAATAATGAAGTTATGGCTTCACATTCATTGCAGTGGGATATGGTTTTTATGTAAACATTTTGTAGAACTCCA
GTTTTCAAAATCATGTTTGAATCTACATTCATTTTTTTTTGTTTTCTTTTTTGAGACGGAGTCTCGCTCTGCCGCC
CAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCAAGCTCTGCCTCCCAGGTTTACACCATCTCTCTGCCTC
AGCCTCCCGAGTAGCTGGGACTACAGGTGCCCACCACCACGCCTGGCTAGTTTTTTGTATTTTGTAGTAGAGACGC
AGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCCGCTCGGCCCTCCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCAGCCTACATTCATTTCTAAAGTCTATGTAATGGTGGTCATTTTTTCC
CTTTTGAATAACATTAATGGTTGATTTGGGGAGGAAAACCTTATTCTGAATATTAACGGTGGTGAAAAGGGGACA
GTTTTTACCCATAAGTGCAAAAGTGAAACATACAAAATAAGACTAATTTTTTAAAGAGTAACTCAGTAATTTCAAAA
TACAGATTTGAATAGCAGCATTAGTGGTTTGAGTGTCTAGCAAAGGAAAAATGATGAATAAAATGAAGGTCTGG
TGATATATGTTTTAAATACTCTCATATAGTCACACTTTAAATTAAGCCTTATATTAGGCCCTCTATTTTCAGGA

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FIGURE 267B

TATAATTCTTAACATCATTATTTACCTGATTTTAATCATCAGATTCGAAATTCTGTGCCATGGCGTATATGTTT
AAATTCAAACCATTTTTTAAATGTGAAGATGGACTTCATGCAAGTTGGCAGTGGTCTGGTACTAAAAATTGTGG
TTGTTTTTCTGTTTACGTAACTGCTTAGTATTGACACTCTCTACCAAGAGGGTCTTCCTAAGAAGAGTGCTGT
CATTATTTCTCTTATCAACAACCTTGTGACATGAGATTTTTTAAGGGCTTTATGTGAACTATGATATTGTAATTT
TTCTAAGCATATTCAAAGGGTGACAAAATTACGTTTATGTACTAAATCTAATCAGGAAAAGTAAGGCAGGAAAAG
TTGATGGTATTCATTAGGTTTTAACTGAATGGAGCAGTTCCTTATATAATAACAATTGTATAGTAGGGATAAAAC
ACTAACTTAATGTGTATTCAATTTTAAATTGTTCTGTATTTTTTAAATTGCCAAGAAAAACAACTTTGTAAATTTGG
AGATATTTTCCAACAGCTTTTTCGTCTTCAGTGTCTTAATGTGGAAGTTAACCCCTTACCAAAAAAGGAAGTTGGCA
AAAACAGCCTTCTAGCACACTTTTTTAAATGAATAATGGTAGCCTAACTTAATATTTTATAAAGTATTGTAAT
ATTGTTTTGTGGATAATTGAAATAAAAAGTTCTCATTGAATGCACCTATTAAAAA

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FIGURE 268

MGCIKSKENKSPAICYRPENTPEPVSTSVSHYGAEP TTVSPCPSSSAKGTAVNFSSLSMTPFGGSSGVTPFGGAS
SSFSVVPSSYPAGLTGGVTIFVALYDYEARTTEDLSFKKGERFQIINNTEGDWWEARS IATGKNYIPSNYVAPA
DSIQAE EWYFGKMGRKDAERLLLNP GNQRGIFLVRESETTKGAYSL SIRDWDEIRGDNVKHYKIRKLDNGGYYIT
TRAQFDTLQKLVKHYTEHADGLCHKLT TVCPTVKPQTQGLAKDAWEIPRESLRLEVKLGQCGFGEVWMGTWNGTT
KVAIKTLKPGTMMPEAFLOEAQIMKKLRHDKLVPLYAVVSEEP IYIVTEFMSKGSLLDFLKEGDGKYLKLPQLVD
MAAQIADGMAYIERMNYIHRDLRAANILVGENLVCKIADFGLARLIEDNEYTARQGAKFPIKWTAP EAALYGRFT
IKSDVWSFGILQTELVTKGRVPYPGMVNREVLEQVERGYRMPCPQGCPESLHELMNLCWKKDPDERPTFEYIQSF
LEDYFTATEPQYQGENL

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FIGURE 269

CTCGGCCCCGGGCTGCCGCGCCAGCCCGTCTCCGCGGCGGGGACCGGGCTGCCTTGGCCCCCTCAGCGCTCGCGT
CTTTTCCGGCAGTTGGAACGCTTCCGTGTGTCTCACCCGTAACCGCCTGTTGCCCCCTGTCTCAGAGTCCCTCA
CGCGTCCCCTCCCGTCTTTGGCTCGTTGGCTGCCGCGCGCGGGGCTTCGCCAGCCTTCAAGTCGAGACTACTGGC
CGAAGGGGCGTCTGCGGCTCTCCGCGGTCCCCAGCCCTGCCTCTCCCTGGGCTCTGCAGCCATGGCAATGACAGG
CTCAACACCTTGCTCATCCATGAGTAACCACACAAAGGAAAGGGTGACAATGACCAAAGTGACACTGGAGAATTT
TTATAGCAACCTTATCGCTCAACATGAAGAACGAGAAATGAGACAAAAGAAGTTAGAAAAGGTGATGGAAGAAGA
AGGCCATAAAAGATGAGGAGAAACGACTCCGGAGATCAGCACATGCTCGGAAGGAAACAGAGTTTCTTCGTTTGAA
GAGAACAAGACTTGGATTGGAAGATTTTGAGTCCTTAAAAGTAATAGGCAGAGGAGCATTTGGTGAGGTACGGCT
TGTTTCAGAAAGATACGGGACATGTGTATGCAATGAAAATACTCCGTAAAGCAGATATGCTTGAAAAAGAGCA
GGTTGGCCACATTTCGTGCGGAGCGTGACATTCTAGTGAGGCAGACAGTTTGTGGGTTGTGAAAATGTTCTATAG
TTTTCAGGATAAGCTAAACCTCTACCTAATCATGGAGTTCCTGCCTGGAGGGGACATGATGACCTTGTTGATGAA
AAAAGACACTCTGACAGAAGAGGAGACTCAGTTTTATATAGCAGAAACAGTATTAGCCATAGACTCTATTACCA
ACTTGATTTCATCCACAGAGACATCAAACCAGACAACCTTCTTTTGACAGCAAGGGCCATGTGAACTTTCTGA
CTTTGGTCTTTGCACAGGACTGAAAAAAGCACATAGGACAGAAATTTATAGGAATCTGAACCACAGCCTCCCCAG
TGATTTCACTTTCCAGAACATGAATTCAAAAGGAAAGCAGAAACCTGGAAAAGAAATAGACGTAGCTAGCCTT
CTCCACAGTAGGCACTCCTGACTACATTGCTCCTGAGGTGTTTCATGCAGACCGGGTACAACAAGCTCTGTGATTG
GTGGTCGCTTGGGGTGATCATGTATGAGATGCTCATCGGCTACCCACCTTTCTGTTCTGAGACCCCTCAAGAGAC
ATATAAGAAGGTGATGAAGTGAAGAAACTTTGACTTTTCCCTCCAGAAGTCCCATCTCTGAGAAAGCCAAGGA
TCTAATTTTGAGGTTCTGCTGTGAATGGGAACATAGAATTGGAGCTCCTGGAGTTGAGGAAATAAAAAGTAAGTCT
TTTTTTTGAAGGCGTTGACTGGGAACATATCAGAGAGAGACCTGCTGCAATATCTATTGAAATCAAAAGCATTGA
TGATACCTCAAACCTTCGATGAGTTTCCAGAATCTGATATTCTTAAGCCAACAGTGGCCACAAGTAATCATCTCTGA
GACTGACTACAAGAACAAGACTGGGTCTTCATCAATTACAGTACAAGCGCTTTGAGGGCCTGACTGCAAGGGG
GGCAATACCTTCCCTACATGAAAGCAGCAAAATAGTACTCTTGCCACGGAATCCTATGTGGAGCAGAGTTCTTTGT
ATAACATCATGCTTTTCTCTCACACTCTTGAAGAGCTTCCAAGAAGTTGATGGAACCCACCAATATGTCATAGT
AAAGTCTCCTGAAATGTGGTAGTAAGAGGATTTTCTTCCATAATGCATCTGAAAACTGTAAACAAAGACAACCA
TTTCTACTACGTCGGCCATAAACAGCTATCCTGCTTTGGAAGAGAAGCATCATGAGCCAATTTGATAGGTGTTTT
AAAAATAACTTGAGTTTTTCTTAAGTTCATCAGAATGAAGGGGAAAAACAGCCATCATCCAACATTATTGAGATTG
TCGTGTATAGTCATCGAATATCAGCCAGTTTCTGTAATTTTGTGACACGCTCTCTGCCAAGCCCACCAAGTATTT
CCTTTATAGCTAAAAGTTCATAGTACTAAGGAAATAAAGCAATAAAGACAGTCTCAGCAGCCAGGATTCTGGCT
GAAGGAAATGATCCGCCACCCTGAGGGTGGTGATGGTAGTTTCTACCCATACCTCAGCCTCAGGCGAGTGCGCTTA
TAGCCTCCATTCATGGTGCATTTTATTTATGGTACTAAGATAAAGACTGTCAATCCATTGATTTATCTCTCTCTG
TCCCCATCTAAAATACCCATGCTGCTTTTCTGAGTGTTGATGGGGTTACCAGCTTGATCCACTGTTGCTCTTA
GAAGGCCCAGAAAGTCTTTGGGCATTGCCAAGAAATCCCGGATTATGTGGAACCCCTCACTTTCTCTTACGGC
TGTACCAGAAAATCCCTAAGACAGATCTTGCCGTGGACTAGCAATACCTGCAAGTGCTGCCAATGGGAACCTCAAT
TTATTCCTGGGAACCTAACGAGGAGAGCCAGGCCCTAGGCAGGAGGCCTGGAACCCCTCTTGGCTAAGGTGCTGTT
CCTGTTCTGCAAGGTCTCCAGAACCCCTTTGGAATGGTGAAGGAACCAGCCCAATAGAAGTACAGAGCCAGCT
GACAAGTCTTGTAAAGCTCACTCCTCAGTCCCTGGCACAGCCATGTTTTGTCTCTCTCTTGGTATTTCTTCTC
TCCCAACTTTAGCCATTTTGCTTGGAAATCATGATTACAATTTTTTCTTTGAGATGCCTTCTGGGGGATACT
CCTCCCCACCCTAAAGGGTCGCTTGCAACTTAGGCGGATTGGGTCTCTCTGCTGTGGCGTTCTCTCTTGAGAGAC
CCTCTGAATTTTAGCACAAAGTGCTTCTGTTTACAGCTGCCACCACCTTTAGAGGAATTTGTCAGAAAAATG
TGGAGGCTCCATATTAATGCATTATTTTTTAAAAAGTTTTGATAACTCTTAAAGCATCATTTGCACCTATGTGGG
AACTTTGCCGTGTTGCAAAGTATTGTGGCCGAGCTGCAGCTGGGAGCCTGCTTTCTGCCAGTCTTGAGGTTCTGAA
GATCAGCTTTGAAAGGAAAGTATGTCCTAGCTTAGCCATTCAGAAAGAGAAAAATGGAATATCAGAGTTACAGTTG
TCAGTGAACTACTTTGGATTTTAACTCTTAGAGGAAGAAAAAGGTTAGGGAAGTGCAACTCTGGATGAAGG
TGATGTGTTTGCTCTCAGTCTTTCATTTCATAGCCTGCTAGTGAAAAGGAAGTAAATGAGATTCTTTTGTGTGAC
TTTGTAGTCTCTTTGTATTACCAATAGTTGGGGTGTGACTCCTGTGTGTTTTGCAAGAATGTGTGGTAAGCCT
GGGTAAAGAGAAGGAAGTGCAGGTGTTGGGAGAGTCTTTGTGTGGGGAGTGGCAGGGGATGATTTGTTTCAGGGG
AAAATGCCACATTTTAACTTTTAACTTCTGAATAAACTGTGTAAAAACAAAAA

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FIGURE 270

MAMTGSTPCSSMSNHTKERVMTKVTLENFYSNLIAQHEEREMRQKKLEKVMEEGLKDEEKRLRRSAHARKETE
FLRLKRTLGLLEDFESLKVIGRGAFGEVRLVQKKDTGHVYAMKILRKADMLEKEQVGHIRAERDILVEADSLWVV
KMFYSFQDKLNLYLIMEFLPGGDMMTLLMKKDTLTEEETQFYIAETVLADS IHQLGFIHRDIKPDNLLLD SKGH
VKLSDFGLCTGLKKAHRTEFYRNLNHS LPSDFTFQNMNSKRKAETWKRNRRLAFSTVGTPDYIAPEVFMQTGYN
KLCDWWSLGVIMYEMLIGYPPFCSETPQETYKKVMNWKETLTFPPEVPISEKAKDLILRFCCWEHRIGAPGVEE
IKSNSFFEGVDWEHIRERPA AISIEIKSIDDT SNFDEFPESDILKPTVATSNHPETDYKNKDWFVINYTYKRFEG
LTARGAIPSYMKA AK

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FIGURE 271A

GGACTGTGTGTGTCTGGCTGTAGCAGACGCGAGGCGGCGACGAGGCGCCGGGGACCCGCGCGAGGGGCGGCCGGG
AGGCGGGCGGCGGCGGCCGAGAAAGTAGCAGCAGGACCGGCGGCGGCGACGGCAGCCCTGAAATGCATTTTCCTC
TCCAGCGGCCATGTTAAACCAGGAAACCTTCGGCCGCCGCTCCCGCCGCCTACCCGACCGGCCGAGGTGGGGACAG
CGCCGTTTCGTACGTTTACGGCTTCCCCGGGGCTCGGTGCAGGGCCCCACCCGGAGCGGAGTGGGGACTGGCCCGCC
CTCCCCCATCGCCCTGCCGCTCTCCGGGCCAGCAACGCTGCCGCCGACGCCACACGATTGGCGGCAGTAAGCA
CACAATGAATGATCACCTGCATGTCGGCAGCCACGCTCACGGACAGATCCAGGTTCAACAGTTGTTTGAGGATAA
CAGTAACAAGCGGACAGTGCTCACGACACAACCAATGGGCTTACAACAGTGGGCAAAACGGGCTTGCCAGTGGT
GCCAGAGCGGCAGCTGGACAGCATTCATAGACGGCAGGGGAGCTCCACCTCTCTAAAGTCCATGGAAGGCATGGG
GAAGGTGAAAGCCACCCCATGACACCTGAACAAGCAATGAAGCAATACATGCAAAAACCTCACAGCCTTCGAACA
CCATGAGATTTTACGCTACCTGAAATATATTTCTTGGGTCTAAATGCTAAGAAGCGCCAGGGCATGACAGGTGG
GCCCAACAATGGTGGCTATGATGATGACCAGGGATCATATGTGCAGGTGCCCCACGATCACGTGGCTTACAGGTA
TGAGGTCTCAAGGTCATTGGGAAGGGGAGCTTTGGGCAGGTGGTCAAGGCCTACGATCACAAAGTCCACCAGCA
CGTGGCCCTAAAGATGGTGCAGGAATGAGAAGCGCTTCCACCGCAAGCAGCGGAGGAGATCCGAATCTGGAACA
CCTGCGGAAGCAGGACAAGGATAACACAATGAATGTCATCCATATGCTGGAGAATTTACCTTCCGCAACCACAT
CTGCATGACGTTTGAGCTGCTGAGCATGAACCTCTATGAGCTCATCAAGAAGAATAAATTCAGGGCTTCAGTCT
GCCTTTGGTTTCGAAGTTTGCCCACTCGATTCTGCAGTGCTTGGATGCTTTGCACAAAAACAGAATAATTCAGTG
TGACCTTAAGCCCCGAGAACATTTTGTTAAAGCAGCAGGGTAGAAGCGGTATTAAAGTAATTGATTTTGGCTCCAG
TTGTTACGAGCATCAGCGTGTCTACACGTACATCCAGTCGCGTTTTTACC GGCTCCAGAAGTGATCCTTGGGGC
CAGGTATGGCATGCCCATTGATATGTGGAGCCTGGGCTGCATTTTAGCAGAGCTCCTGACGGGTTACCCCTCTT
GCCTGGGGGAAGATGAAGGGGACCAGCTGGCCTGTATGATTGAAGTGTGGGCATGCCCTCACAGAACTGCTGGA
TGCATCCAAACGAGCCAAAAATTTTGAGCTCCAAGGGTTATCCCCGTTACTGCACTGTACGACTCTCTCAGA
TGGCTCTGTGGTCCTAAACGGAGGCCGTTCCCGGAGGGGAAACTGAGGGGCCACCCGAGAGCAGAGAGTGGGG
GAACGCGCTGAAGGGGTGTGATGATCCCTTTTTCTTGAAGTCTTAAACAGTGTTTAGAGTGGGATCCTGCAGT
GCGCATGACCCAGGCCAGGCTTTGCGGCACCCCTGGCTGAGGAGCGGTTGCCAAAGCCTCCACCGGGGAGAA
AACGTCAGTGAAAAGGATAACTGAGAGCACCGGTGCTATCACATCTATATCCAAGTTACCTCCACCTTCTAGCTC
AGCTTCCAAACTGAGGACTAATTTGGCGCAGATGACAGATGCCAATGGGAATATTCAGCAGAGGACAGTGTGCC
AAAACCTGTGTAGCTGAGCTCACGTCCCTGATGCTGGTAACCTGAAAGATACGACATTGCTGAGCCTTACTGGGT
TGAAAAGGAGTAGCTCAGACCTGTTTTTATTTGCTCAATAACTCTACTCATTGTATCTTTTACGACTTAATTT
TAATGTAAGAAAGTTGTTTCAATTTGTTTTATATAAATACATGAGGACAATGCTTTAAGTTTTTATACTTTAGAA
ACTTTTGTGTTCTAAAAGTACAATGAGCCTTACTGTATTTAGTGTGGCAGAATAATAACATCAGTGGCAGGCCA
CTGATTACTTCATGACTGCCACGCATTTACAGATTGGTGTCAAAGACATTCACTATGTTTTTATGGTTTATGTTA
TATCTCCCCAGGGTGACAGCCCTTAAGGCCCTCCTTTTCCCTCCATGCTCCAGGTCCATGCACAGGTGTAGCA
TGTCTGCTTCCGTTTTTCATAAATTAATCTGGGTGTTGGGGTAGTGGGAGGAGAACGGTCAGAATCAAAGTGA
CATTTAAGAAAACTGTACCTTAGAGATTTTCTCTAGTGCTCAAACAAATACAAATAAGATCCCCAAGGTTT
AAACTGCCCAGTTAGCATTCTGACATTCTAAAAGCCGGCAAAGCAGCTTTTAGTGGATAAATGGGAATGGAAACG
TGTGTGTTCTCCAAATTTTCTAGTATGATCGGTGAGCTGTTTTGTAAAGAAGCCTCATATTACAGAGTTGCTTT
TGCACCTAAATTTAGAATTGTATCCATGAAGTGTCTCCTCCTTTTCTCTGCTTTTCTCCTCTCTGTTCTCTTT
TAATACCACACGTCTGTTGCTTGCATTTAGTTTGTCTTCTTCTTTCCTTACGCTGTGTATCCCAGACTGTTAATACAGA
AAAGAGACATTTACAGCTGTGATTATGACCATTGTTTTCATATTCCAATTAAAAAAGAAGCAGCAGCTAGCTACTT
AAGGTGGGGATTTTATAGTTCCAAAGAAGATTTAGCAGATTAGAGTGAGTTCACACTTTTACAGGTGCCACTGTAA
GGTTCTCTCAGCCTGGGAAACTATCAACTCTTTCTTTAAAAAGAAAGAGGGTTGAAAATCCTCTGGACGAACAGA
AGTCACTTTGGCTGTTTCAAGGCAATGTTAACAACACGTTTAGAGGAGGAAAAGTTCAACCTCAAGTTAAAT
GGTTTGACTTATTTCTCGTATCATTAGAAGAACCCAGAGATAGCATTCCTCTATTTTATTTTACTTTCTTTTGG
ATTGCACTGATTGTTTTTGTGGGAATGACACTTTATCTGGCAAAGTAACTGAGAGTTTGGTAAAGAATATTTTC
TTCTCTGAATAATAATTATTTTACAGTGAAAATTTTCAAGTATTTTATCACTAATGTATGAGCAATGATCTATATC
AATTTCAAGGCAGTGAAAAAATTTTTTAGTATGTGCAATTTAATATAGAAAGATTTCTGCCTGTTTGGACAAT
AGGTTTTGGGTAGTACAGATTAGGATAAGTAAGCTTATATATGCACAGAGATTATTGTATTACCTGTAAATTGAT
TTACAAGTACTTAAAGCGTGGTCCCCAGTGAGGCCAAGAAAGTTCCGGTTAAGTTCTTTAATAATAATCCTAC

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FIGURE 271B

AGTTTATCTTAAGAA

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FIGURE 272

MLTRKPSAAAPAAAYPTGRGGDSAVRQLQASPGLGAGPTRSGVGTGPPSPIALPPLRASNAAAAAHTIGGSKHTMN
DHLHVGS SHAHGQIQVQQLFEDNSNKRTVLTTPNGLTTVGKTGLPVVPERQLDSIHRRQGSSTSLKSMEGMGKVK
ATPMTPEQAMKQYMQKLTA FEHHEIFSYPEIYFLGLNAKKRQGMTGGPNNGGYDDDQGSYVQVPHDHVAYRYEVL
KVIGKGSFGQVVKAYDHKVHQHVALKMVRNEKRFHRQA AEEIRILEHLRKQDKDNTMNVIHMLENFTFRNHICMT
FELLSMNLIELIKKNKFQGFSLPLVRKFAHSILQCLDALHKNRIIHCDLKPENILLKQQGRSGIKVIDFGSSCYE
HQRVYTYIQSRFYRAPEVILGARYGMPIDMWSLGCILAELLTGYP LLPGEDEGDQLACMIELLGMP SQKLLDASK
RAKNFVSSKGYPRYCTVTILSDGSVVLNGGRSRRGKLRGPPE SREWGNALKGCD DPLFLDFLKQCLEWDP AVRMT
PGQALRHPWLRRRLPKPPTGEKTSVKRITESTGAITSISKLPPPSSSASKLR TNLAQMTDANGNIQORTVLPKLV
S

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FIGURE 273A

CAGCTGCCAGCCGAGGAGGCGCGGCGGAGAGGGGACTGCGGTCAGCTGCGTCCACTTGGGGCTGTGCGGCGGTCC
CGCGCCCGGCGATGTTCCCGGGCACTCCCTGAGTAGCGGCAGCTTATCCCCGCCCCGCTAGCCCGCCCTGGTCCC
CGGCTCGCTCGTGGCTGGCGCGGCCCCGCCCCGCTCTGCGTCGGCCCCGCCGCGGTGGAGGCGCGCAGGGGG
ACGCGGCCGGGGATGAGCGGATTGCGGGTGAACTCGCCGCCGGGGGCCCCGGAAGCCGTGAGCCGCTGCTTTT
CTCCGAGTCGCCGCCCTGCCCTTGGATTGAGATCATGTCCATCCACATCGTGGCGCTGGGGAACGAGGGGGACA
CATTCACCAGGACAACCGGCCGTGCGGGCTTATCCGCACTTACCTGGGGAGAAGCCCTCTGGTCTCCGGGGACG
AGAGCAGCTTGTGCTGAACGCGGCCAGCACGGTCGCGCGTCCGGTGTTCACCGAGTATCAGGCCAGTGCGTTTG
GGAATGTCAAGCTGGTGGTCCACGACTGTCCCGTCTGGGACATATTTGACAGTGATTGGTACACTTCTCGAAATC
TAATTGGGGGCGCTGACATCATTGTGATCAAATACAACGTTAATGACAAGTTTTTCATTCCATGAAGTAAAGGATA
ATTATATTCCAGTGATAAAAAGAGCATTAAATTCAGTTCAGTAATTATTGCTGCTGTTGGTACCAGACAAAATG
AAGAGTTACCTTGTACATGCCCACTATGTACCTCAGACAGAGGGAGCTGTGTTAGTACAACCTGAAGGGATCCAAC
TTGCAAAAGAACTAGGAGCAACCTATCTTGAACCTCCACAGCCTTGATGACTTCTACATAGGAAAGTATTTTGAG
GAGTGTGGAGTATTTTATGATTCAAGCCTTAAATCAGAAGACAAGTGAAAAATGAAGAAAAGAAAAATGAGCA
ACTCCTTTTATGGAATTAGACCACCTCAACTTGAACAACCAGAAAAATGCCTGTCTTAAAGGCTGAAGCGTCAC
ATTATACTCTGACTTAAATAACTTGCTGTTCTGCTGCCAGTGTGTGGACGTGGTATTTTATAACCCCGATTAA
AGAAAGTTGTAGAGGCCCAAGATCGTTCTCTGCGTGTAAAGCCATGTTTTCATGCTGCTTTTCAATGTGAAGA
GTCCCACTGACATTCAGGATTCCAGTATCATCCGAACCTACCCAGGATCTTTTTGCTATAAACAGAGATACTGCAT
TTCCAGGTGCTAGCCATGAATCTTCAGGCAACCCACCATTACGAGTCATTGTTAAAGACGCCCTCTTCTGTTCTT
GTTTATCAGACATCCTTCGCTTCATTTATTCAGGTGCTTTTTCAGTGGGAAGAATTGGAAGAAGATATCAGGAAGA
AGTTGAAAGATTCTGGGGATGTTTCAAATGTAATCGAGAAAGTTAAATGCATTTTAAAAACACCAGGAAAGATTA
ATTGCCTAAGGAATTGCAAAACCTATCAAGCCAGAAAACCTTTGTGGTTTTATAACACTTCCCTCAAGTTTTTCC
TTAATAAGCCGATGCTTGCCGATGTTGTCTTCGAAATTCAAGGTACGACAGTGCCAGCCACAGGGCCATCCTGG
TGGCCCGTTGTGAAGTGATGGCAGCCATGTTAATGGTAATTACATGGAAGCAAAGAGTGTCTGATTCCCGTTT
ATGGTGTTCCAAAGAGACTTTCTTGTCATTTTGAATACCTGTACACAGACTCCTGCTGCCAGCTGGCATAT
TCCAGGCCATGTGTCTCCTGATCTGTGCCGAGATGTACCAAGTGTCCAGACTGCAGCACATCTGTGAGCTGTTCA
TCATTACCCAGCTGCAGAGCATGCCAAGCAGGGAACCTGGCATCCATGAACCTTGATATAGTTGACCTGCTTAAAA
AGGCCAAGTTTCACCACTCTGATTGCCTTTCAACCTGGCTACTTCATTTTATTGCTACTAACTACCTCATCTTCA
GTCAAAAGCCTGAATTTAGGATCTTTCAGTGGGAAGAAGCGAGTTTTGTTGAAAAGCACAGATGGCCGTCGAATA
TGTAATTGAAGCAGCTTGCGGAATACAGGAAGTATATTCACTCCCGGAAATGTCGTTGCTTAGTAATGTAACTG
GAGCTTTTATACACTACATTTCTTTTTTATTATTATGAAGAATGGGATACCTCCAGGTTCCAGTAAATTTCTTCT
GACCGAAACCAATGTGGGTGTTAGAAAAATTACCATATAGCTTAATATGTTTATTAGTTCTCTTTGGAAAAAAC
TACCACTGTGGTCTTAAAGGGGAACAAAATATACCATAGGCTAAACTAAGGCTTTCACTCTAGAAATGCAAAGCT
GTTTTGCAGCTGTTTTCCCTTAAAGATGTCTGTTGCTTTAGTGATATTTAGACCCCTCTCAGTTAAGAAATGCT
TAGATTAAAAAATAAATACGTAGGATTAATACAGAAATTTAATCATGTCTGATTAATTGCTCTATTAAAAATA
AGGGGCATTTAAAGACCCAGCATAACCATTTGTATAATGAGAAATCTAGGGGAAAACCAATCAGTCCAACATGAG
ATTTTAGGAATAGAAATTTGCCGGCCATTTGGAAAGTGAAATGCCACTTAGTTCTCAATTGATGACAGTGTTTGA
ATCATCATAAAAAATAACCTGCTTTTCATCTGGACAACCCAATTGAGCCACTTTATCTCCTTTTGGCAATCTGA
GTAGGCGGGGAACCTAGGCAGGGCTGGCTTTCTTAGCGTGTAACCTTGTGTAGCAGCACAGGGCCACACTTAGAA
GGACCCACACTTGGTTCAAGGCTCTGCTATAGCGGAAATCTTAATAATGTTTGAAGAAGGGCCCCATGATTTT
ATTTTGTGCTGAGCCCTCAAAATTATGTCTGTTTCGTGGTGGGAATATCCTATGTTTTCTTGCTCAAACACCTT
TCTCTCTGAAAGCAGAAAAAGGCACTGATATAAAGGGAAGAGAAGGAGGCTCACCGGAGGGAAGAGAACATAGTG
AAGATTCCCGCCTTTGGGGAGGTCTGGACCACCCAGGGCTCCACTGCCACCTTGGCTGGCAAGGGAGAAATGTG
TTGTGTTGTCTTAGCTTTAAACAGTCACAGTTCTTGCTCTATCATAGATGAACAAATACTTTCTTGATCATTCT
GTAAGACCAGGAGGTTGGTAAGAGTGACTAACCAGCCTAACTTTAATACACATGTATAAAGATGTTTACAGAGAA
AGATGCTCTGTAGAGAATTTGCTACCGAAGTTGGCTCAAGAATTTGTTTTAGTGTTATTTACCAAGATTAGGAC
GTCAGTGGCTTAAATCTTTGAATTCTTTTCAAGGACTGCAAGATTATTTGATAAAGAGTAGCATGAATCTTG
CTCTAATATTACACAGTAAGTTCAAAGAAAGGATGTAAGTCAAAGACTTGTTACATAGAGGGAAAATGGACTGGG
ATAGAGGACAGACTGATAGTTTCTTTCTTTTATATCACATGTATAGAGAAATAATTATATCAGAACTCACAAAC

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FIGURE 273B

CTAGACATGGAAAAACAGATTACTGTCTATTGTCAGCATCATTTTCATCTGTAAGTCACTACTGGAATATATTTT
TCTTTTAATTTCCAGTGACTTTAGAAATACACACAGTTTTTCCGACTTTTCAAAAATTTGATTAAATGGTTTTATA
GTATAATATTGGGACCCCATACCGTTAGCCCTTGTATGTATACCAACACTGCCAAAGTAAAACATTAGGTCAGGC
ATGGTGGCTCAGGCCTGTAATCCCAGCATTTTGGGAGGCTGAGGCAAGTGGATAACTTGAGGTCATGAGTTCGAA
ACCAGCCTGGCCAAAACAGTGAAACCCCGTCTCTACTAAAAATACAAAATTAGCCAGATGTGGTGGCGCACACCT
GTAATCCCAGCTACTCAGGAAGCTGAGGCAGGAAAATCGCTTGAACCTGGGAGGTGGAAGTTGCAGTGAGCCGAG
ATCGCACCCTGCACTCCAGCCTGGGTGACAAGAGCGAAACTCCATCTC

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FIGURE 274

MSIHIVALGNEGDTFHQDNRP SGLIRTYLGRSPLVSGDESSLLLNAASTVARPVFTEYQASAFGNVKLVVHDCPV
WDIFDSDWYTSRNLIGGADIIVIKYNVNDKFSFHEVKDNYIPVIKRALNSVPVIAAVGTRQNEELPCTCPLCTS
DRGSCVSTTEGIQLAKELGATYLELHSLDDFYIGKYFGGVLEYFMIQALNQKTSEKMKKRKMSNSFHGIRPPQLE
QPEKMPVLKAEASHYNSDLNNLLFCCQCVDVVFYNPDLKKVVEAHKIVLCAVSHVFMLLFNVKSPTDIQDSSIIR
TTQDLFAINRDTAFPGASHESGNPPLRVIVKDALFCSCLSLILRFIYSGAFQWEELEEDIRKKLKDSGDVSNVI
EKVKCILKTPGKINCLRNCKTYQARKPLWFYNTSLKFFLNKPMLADVFEIQGTTVPAHRAILVARCEVMAAMFN
GNYMEAKSVLIPVYGVSKETFLSFLEYLYTDSCCPAGIFQAMCLLICAEMYQVSRLOHICELFIITQLQSMPSRE
LASMNLDIVDLLKKAKFHHSCLSTWLLHFIATNYLIFSQKPEFQDLSVEERSFVEKHRWPSNMYLKQLAEYRKY
IHSRKCRCLVM

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FIGURE 275A

CAGCTGCCAGCCGAGGAGGCGCGGCGGAGAGGGGACTGCGGTTCAGCTGCGTCCACTTGCGGCTGTGCGGCGGTCC
CGCGCCCGGCGATGTTCCCGGGCACTCCCTGAGTAGCGGCAGCTTATCCCCGCCCCGCTAGCCCCGCCCTGGTCCC
CGGCTCGTTCGCTGGCTGGCGCGGCCCGGCCCGCTCTGCGTCGGCCCCGCGCGGTGGAGGCGCGCAGGGGG
ACGCGGCCCGGGATGAGCGGATTGCGGGTGAACTCGCCGCCCGGGGGCCCCGGAAGCCGTGAGCCGCTGCTTTT
CTCCGAGTCGCCGCCCTGCCCTTGGATTTGAGATCATGTCCATCCACATCGTGGCGCTGGGGAACGAGGGGGACA
CATTCCACCAGGACAACCGGCCGTCGGGGCTTATCCGCACTTACCTGGGGAGAAGCCCTCTGGTCTCCGGGGACG
AGAGCAGCTTGTTGCTGAACGCGGCCAGCACGGTCGCGCGTCCGGTGTTACCGAGTATCAGGCCAGTGCGTTTG
GGAATGTCAAGCTGGTGGTCCACGACTGTCCCGTCTGGGACATATTTGACAGTGATTGGTACACTTCTCGAAATC
TAATTGGGGGCGCTGACATCATTGTGATCAAATACAACGTTAATGACAAGTTTTTCATTCCATGAAGTAAAGGATA
ATTATATTCCAGTGATAAAAAGAGCATTAAATTCAGTTCAGTAATTATTGCTGCTGTTGGTACCAGACAAAATG
AAGAGTTACCTTGACATGCCACTATGTACCTCAGACAGAGGGAGCTGTGTTAGTACAACCTGAAGGGATCCAAC
TTGCAAAAGAACTAGGAGCAACCTATCTTGAACCTCCACAGCCTTGATGACTTCTACATAGGAAAGTATTTTGGAG
GAGTGTTGGAGTATTTTATGATTCAAGCCTTAAATCAGAAGACAAGTGAAAAATGAAGAAAAGAAAAATGAGCA
ACTCCTTTTCATGGAATTAGACCACCTCAACTTGAACAACCAGAAAAATGCCTGTCTTAAAGGCTGAAGCGTCAC
ATTATAACTCTGACTTAAATAACTTGCTGTTCTGCTGCCAGTGTTGGACGTGGTATTTTATAACCCCGATTAA
AGAAAGTTGTAGAGGCCCAAGATCGTTCTCTGCGCTGTAAGCCATGTTTTTCATGCTGCTTTTCAATGTGAAGA
GTCCCACTGACATTCAAGATTCCAGTATCATCCGAACCTACCCAGGATCTTTTTGCTATAAACAGAGATACTGCAT
TTCCAGGTGCTAGCCATGAATCTTCAGGCAACCCACCATTACGAGTCATTGTTAAAGACGCCCTCTTCTGTTCTT
GTTTATCAGACATCCTTCGCTTCATTTATTCAGGTGCTTTTTCAGTGGGAAGAATTGGAAGAAGATATCAGGAAGA
AGTTGAAAGATTCTGGGGATGTTTTCAAATGTAATCGAGAAAGTTAAATGCATTTTAAAAACACCAGGAAAGATTA
ATTGCCTAAGGAATTGCAAAACCTATCAAGCCAGAAAACCTTTGTGGTTTTATAACACTTCCCTCAAGTTTTTCC
TTAATAAGCCGATGCTTGCCGATGTTGTCTTCGAAATTCAAGGTACGACAGTGCCAGCCACAGGGCCATCCTGG
TGGCCCGTTGTGAAGTGATGGCAGCCATGTTAATGGTAATTACATGGAAGCAAAGAGTGCTCTGATTCCCGTTT
ATGGTGTTTTCAAAGAGACTTTCTTGTCATTTTTAGAAATACCTGTACACAGACTCCTGCTGCCAGCTGGCATAT
TCCAGGCCATGTGTCTCCTGATCTGTGCCGAGATGTACCAAGTGTCAGACTGCAGCACATCTGTGAGCTGTTCA
TCATTACCCAGCTGCAGAGCATGCCAAGCAGGGAACCTGGCATCCATGAACCTTGATATAGTTGACCTGCTTAAAA
AGGCCAAGTTTTCAACTCTGATTGCCTTTCAACCTGGCTACTTCATTTTCATTGCTACTAACTACCTCATCTTCA
GTCAAAAGCCTGAATTTCAAGATCTTTCAGTGGAAGAACGCAGTTTTGTTGAAAAGCACAGATGGCCGTCGAATA
TGTACTTGAAGCAGCTTGCGGAATACAGGAAGTATATTCACTCCCGGAAATGTCGTTGCTTAGTAATGTAACTG
GAGCTTTTATACACTACATTTCTTTTTTATTATTATGAAGAATGGGATACCTCCAGGTTCCAGTAAATTTCTTCT
GACCGAAACCAATGTGGGTGTTAGAAAAATTACCATATAGCTTAATATGTTTATTAGTTCTCTTTGGAAAAAAC
TACCACTGTGGTCTTAAAGGGGAACAAATATACCATAGGCTAAACTAAGGCTTTCACTCTAGAATGCAAAGCT
GTTTTGCAGCTGTTTTCCCTTAAAGATGTCTGTTGCTTTAGTGATATTTAGACCCCTCTCAGTTAAGAAATGCT
TAGATTAAAAAATAAATACGTAGGATTAATACAGAAATTTAATCATGTCTGATTAAATGCTCTATTAAAAATA
AGGGGCATTTAAAGACCCAGCATAACCATTTGTATAATGAGAAATCTAGGGGAAAAACCAATCAGTCCAACATGAG
ATTTTAGGAATAGAAATTTGCCGGCCATTTGGAAAGTGAAATGCCACTTAGTTCTCAATTGATGACAGTGTTTGA
ATCATATAAAAAAATAACCTGCTTTTCATCTGGACAACCCAATTGAGCCACTTTATCTCCTTTTGGCAATCTGA
GTAGGCGGGGAACCTAGGCAGGGCTGGCTTTTCTTAGCGTGTAACCTTGTTGAGCAGCACAGGGCCACACTTAGAA
GGACCCACACTTGGTTCAAGGCTCTGCTATAGCGGAAATTTCTTAATAATGTTTGAAAGAGGGCCCCATGATTTT
ATTTTGTGCTGAGCCCTCAAATTATGTCTGTTTCGTGGTGGGAAATATCCTATGTTTTCTTGCTCAAACACCTT
TCTCTCTGAAAGCAGAAAAAGGCAGTGATATAAAGGGAAGAGAAGGAGGCTCACCGGAGGGAAGAGAACATAGTG
AAGATTCCCGCCTTTGGGGAGGTCTGGACCACCCAGGGCCTCCACTGCCACCTTGGCTGGCAAGGGAGAAATGTG
TTGTGTTGTCTTAGCTTTAAACAGTCACAGTTCTTGCTCTATCATAGATGAACAAATACCTTCTTGATCATTCT
GTAAGACCAGGAGTTGGTAAGAGTGACTAACCAGCCTAACTTTAATACACATGTATAAAGATGTTACAGAGAA
AGATGCTCTGTAGAGAAATTTGCTACCGAAGTTGGCTCAAGAATTTGTTTTAGTGTTATTTACCAAGATTAGGAC
GTCAGTGGCTTAAATTTCTTTGAATTTCTTTCAAGGACTGCAAGATTATTTGATAAAGAGTAGCATGAATCTTG
CTCTAATATTACACAGTAAGTTCAAAGAAAGGATGTAAGTCAAAGACTTGTTACATAGAGGGAAAAATGGACTGGG
ATAGAGGACAGACTGATAGTTTCTTTCTTTTCATATCACATGTATAGAGAAATAATTATATCAGAACTCACAAAC

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FIGURE 275B

CTAGACATGGAAAAACAGATTACTGTCTATTGTCAGCATCATTTTCATCTGTAAGTCACTACTGGAATATATTTT
TCTTTTAATTTCCAGTGACTTTAGAATACACACAGTTTTTCCGACTTTTCAAAAATTTGATTAAATGGTTTTATA
GTATAATATTGGGACCCCATACCGTTAGCCCTTGTATGTATACCAACACTGCCAAAGTAAACATTAGGTCAGGC
ATGGTGGCTCAGGCCTGTAATCCAGCATTTTGGGAGGCTGAGGCAAGTGGATAACTTGAGGTCATGAGTTCGAA
ACCAGCCTGGCCAAAACAGTGAAACCCGTCTCTACTAAAAATACAAAATTAGCCAGATGTGGTGGCGCACACCT
GTAATCCAGCTACTCAGGAAGCTGAGGCAGGAAAATCGCTTGAACCTGGGAGGTGGAAGTTGCAGTGAGCCGAG
ATCGCACCCTGCACTCCAGCCTGGGTGACAAGAGCGAACTCCATCTC

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FIGURE 276

MSIHIVALGNEGDTFHQDNRPGLIRTYLGRSPLVSGDESSLLLNAASTVARPVFTEYQASAFGNVKLVVHDCPV
WDIFDSDWYTSRNLIGGADIIVIKYNVNDKFSFHEVKDNYIPVIKRALNSVPVIAAVGTRQNEELPCTCPLCTS
DRGSCVSTTEGIQLAKELGATYLELHSLDDFYIGKYFGGVLEYFMIQALNQKTSEKMKKRKMSNSFHGIRPPQLE
QPEKMPVLKAEASHYNSDLNNLLFCCQCVDVVFYNPDLKKVVEAHKIVLCAVSHVFMLLFNVKSPTDIQDSSIIR
TTQDLFAINRDTAFPGASHESGNPPLRVIVKDALFCSCLSLDIRFIYSGAFQWEELEEDIRKKLKDSGDVSNVI
EKVKCILKTPGKINCLRNCKTYQARKPLWFYNTSLKFFLNKPMPLADVFEIQGTTVPAHRAILVARCEVMAAMFN
GNYMEAKSVLIPVYGVSKETFLSFLEYLYTDSCCPAGIFQAMCLLCAEMYQVSRLQHICELFIITQLQSMPSRE
LASMNLDIVDLLKKAKFHHSCLSTWLLHFIATNYLIFSQKPEFQDLSVEERSFVEKHRWPSNMYLKQLAEYRKY
IHSRKCRCCLVM

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FIGURE 277

GCGGCCGCGTGGCCAGGCAACCTATGGGTACCACCGGGTTCTCGCGGGTCTTGCGAACGAACTTTTCTTGAAA
CTCTCTGGATTCCCTGTAAACAGTGGGGCTCAGCCCCCTCAATGACTGGAGGCTTCGATGGTTCAAAGGGGACCTCC
GGAATCACAGGGCCGGGAGTCGCCATGTCCGGGCCACAGCAGCAGGAGAAAATCGGGACTCCGACCTCAGCCTCC
CGGTGAAGGTCATGAAAGGGGCGGGGAAACGAATAAATTGAGCCTTGACGCAGGCGCAAATGCTCGTTGCATCC
TGGGAGTCGTAGTGCTCAGCACGGTAGTGCTACAAAAGGACTACATTTCCCCAAATGCCCGCAAAGCCTTGTC
CGCCTTCCGGAAGGAGTTTGTACACGAGGTCTGAGAGACAGAGGCAGCGTGTGAGCTGCTGGTGCGGTGGTC
AGCGCGATGCCCAAGGCCAAGGGCAAAACCCGGAGGCAGAAGTTTGTTACAGTGTCAACCGAAAGCGTCTGAAC
CGGAATGCTCGACGGAAGGCAGCGCGCGGAATCGAATGCTCCACATCCGACATGCCTGGGACCACGCTAAATCG
GTACGGCAGAACCTGGCCGAGATGGGGTTGGCTGTGGACCCCAACAGGGCGGTGCCCTCCGTAAGAGAAAGGTG
AAGGCCATGGAGGTGGACATAGAGGAGAGGCCCTAAAGAGCTTGACGGAAGCCCTATGTGCTGAATGACCTGGAG
GCAGAAGCCAGCCTTCCAGAAAAGAAAGGAAATACTCTGTCTCGGGACCTCATTGACTATGTACGCTACATGGTA
GAGAACCACGGGGAGGACTATAAGGCCATGGCCCGTGATGAGAAGAATTACTATCAAGATACCCCAAAACAGATT
CGGAGTAAGATCAACGTCTATAAACGCTTTTACCCAGCAGAGTGGCAAGACTTCCTCGATTCTTGCAGAAGAGG
AAGATGGAGGTGGAGTAACTGGTTTACATCACAGCTGCCCCAGGCTGAGGCGTCCCCCGGACCAGTGAAGCTGGA
GCCAGGGTGTAAGGCAAGGAGGTGCTGTGTGGCTCCAGAGGGGCTGGCCAGGTCCCATGGAATCAGAAGGTTACA
CACACACGTGCACACTCCCCGCTCTGGGGAAGGAAGTGTCTCAGAGGCTCCAATTTATATTCTCTGGGGGTTT
ACGGAAGCCAGAACCTGCTGTTTTTCAGGGTGGGTGATGTAAATATAGTGTGTACATAATAAGCAAATATATT
TTAA

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FIGURE 278

MPKAKGKTRRQKFGYSVNRKRLNRNARRKAARGIECSHIRHAWDHAKSVRQNLAEMGLAVDPNRAVPLRKRKVK
MEVDIEERPKELVKPYVLNDLEAEASLPEKKGNTLSRDLIDYVRYMVENHGEDYKAMARDEKNYYQDTPKQIRS
KINVYKRFYPAEWQDFLDSLQKRKMEVE

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FIGURE 279A

CGTCCACCGTGGAGTCTCTCCTTGCTTTGGGTCCACTGAGCCCCACACATTGTTGAGTGTCTGATTGTCTCCTTG
CCCTTACAGGACAGGAAAGCGAAATCTCTGTTCCTTTGTAGGGACCTTTCTTTTGTAGGTGAAAGGGACAGAAAT
ATGATTCTGGCCTCCTTGATGGTGAATACAGGAACACTTTTCAGATAAATTACAATAGAGAGGAGTCAGCTTATTT
AAACAAACTGAGGTTAAGCCAGAGATTGCAGTTAACAGTGAAAAAATTTAAAGCAAGTACCTGGATGGATGCAAA
GCAGTGCCCAGGAGACCCAACTTACGTGACAGAGATGATCATTGTCACTCATTCAATATGTTTTGAGCACCAGCC
ATGTGCCAGGTCCAGAACTAGAAGAACTTGGGTGTAGGTGAGATCATAGGAACAGTCCCTGCCCCAGCTGAACA
TCAGGAAGCCAGACTGGGAGCACATGCCGTGGCTGACTAGGACTCCAGCAGGGACCTGGGGTTCCATCAGATCAG
TGTAAGCGATGGTTTCCCAAATGAGACCTCTCCAGAGATGGTTCAATCCACCCCGCAATGGCCACCAGAAACAT
TGTGCTGACCAGAGGGCTTCACTGCCCCAAACCCCAAAATCACACTCCAGGATGAGAAACCTAAAAGTCTATCTT
GATGAGGCTTCATAGCTGGAAACCACCCCTCATGGATCCACAGGCTGCATTTGATGAAAGGAGACTCCAGGAAGT
CGAGCCATTCCAGGCAGACATGTAGCAAAAGCCCCGAGCTGGGGTCCGCCCTCATGCAATAAATAACACCTGTGCA
CATAAGAGAGGTGACAGGCAGGGCATCCCTGGGGACCTGGGCCTGTGGCACGTGAAGAAACACCCAAGAGAGCAC
GAAGTCCCAATGCCATGACCAGATATTTTCGGTGCCAGGCATGCTTCTGGGTCCCAGCAAAAGACACACAAATCCG
TGTCTTGGGGACCCACAGTCTAGTGACCTAGGGCTGGCCGGGTGCGACGCTTCTTTTCAAGGGCTCGAAAGCCT
CTGCATGGATGCAACTTTGGGGGAAAAGTAACCCTAACCCCTCTGCTTCTCTCATCCTCCCCTCTTCTGTGTATAT
GTCTGTCTCTTTCTCTCTGTGTGTGCCCTTCCCCACTCCCATTCCCTTTTATTATTATATTTTGGT
GGTGTGTGGCTCGGTTTCTGTTGGTCCCTCGTGTGGCCCTCCCTGCTGCAGAACTCGTCCAGCTCGGCCTCC
TCCGAAGCCTCGGAAACCTGCCAGTCAGTGAGCGAGTGACGCTCCCCACCTCTGTGAGCTCGGGCTCCACCATG
GGTGCCTGGGTGTCCACAGAGAAGGTGACCGCCCGGGTGGCAGCCACAGCGGCCCACTCTCCCTGGTCCCCCTG
CCTGCTGCTCAGACAGCCCTCACAGCCGCGGCAACCTGGAAGCTCAGAATCGACACCAAGAGTGGGGCTCCTCTT
GGGGACAGAGGGTGGGACAAGGCTGAGAGCATTTTCTAGAATGAGTGCCTGGCTGCTGGACAATGACCACATGGT
TGTCTCAAGGGAGAGGAAGGGGTATGGGGAATTTGGAGGTGTGAAGGCTTTCTCCAGACCAGGTGTTGCGTGCC
TGTCCATCCTCCTCCCTCCCTTCCCGAGCCACCCACCAGACCGTTGGATGAGCCATGTCACTGTGTGAGAGGCTG
TGTGCTTTTCCGCTTTTTAGTTTGCACCCCCACCCCTGCCCCTGATTGAGAATGTGCTCCTGAGCAATGCGAC
GATTTTGGAAACCTAGAATGAACAGATTCATTTGAAGATGCTTTGGAATTTTTAAATTTGCATAATGAAATGAGC
AAATCACTATCACCATTAAATGAGGCTTCATTAGTTACATTATCAAAAACCAATTGACAAGGCCACAAATTGAGGG
CACTGATCAATTTCCAACTTCTAAAACGTAGGTCAAACATAGATGCTTATTTGCTGTCAAACCTCATGTGCATTC
TTTGCACCCCGGCTCTTTTCTCTTGCATCACAGATCATCCGTGAGCAGCAGAGCCCCAATGTTTGTGTTTTATTAT
AAATATTGAGGTTTCCCTCCCTTGAATGTCAATGCCATTTTGTATCTCCGCACTCATCTGTTATATTAATTTT
TTTTCTTTCCCCCCCCCTTTTTTGTGTTTCCAGTTGTCTAACGGGTTTTCTCACTATAGTTTATCAAGTGAG
TCCACGTGGGGCCACGGGTGCAGGCCTTTTCCCTCATTTGCCTGCCTGCCCTCCCGCTGCTCCCTCGGGTCACC
TCTGTCCACCTTCCAGACTACGCTCATTATTACACCATTTGGGCCCCGCAATGTTTCCCGTCACTCAGATCCCTAGC
TGGAAGGACTGGGCTAAGCCTGGGCCCTATGACCAGCCTCTGGTGAACACCCTGCAGCGCCGCAAGAGAAGCGA
GAACCGGACCCCAACGGGGGAGGACCCACTACCGCCAGCGGCCACCTGCAGCAGCTGAGGAGGCTCAGAGACCA
CGGAGCATGACTGTATCGGCTGCCACCAGGCCTGGTGAGGAGATGGAGGCTTGTGAGGAGCTGGCCCTGGCCCTG
TCTCGGGCCTGCAGCTGGACACCCAGAGGAGCAGCCGGGACTCGCTTCAGTGCTCCAGCGGCTACAGCACCCAG
ACAACCACCCCTGCTGCTCTGAGGACACCATCCCTTCCCAAGTTTCAGATTATGATTATTTCTCTGTAAGTGGT
GACCAGGAGGCAGATCAGCAGGAGTTGACAAAGTCCCTCCACCATTTCCAAGAAACAGCGACATCAGCCAGTCTTAC
CGACGGATGTTCCAAGCCAAGCGTCCAGCCTCAACTGCTGGCCTCCCCACCACCTGGGACCTGCTATGGTCACT
CCAGGGGTGCAACTATCCGACGGACCCCTTCCACCAAGCCTTCTGTCCGCCGGGAACCAATTGGAGCTGGTCCC
ATCCCCATCAAGACACCCGTGATCCCTGTCAAGACCCCAACCGTCCAGACCTCCAGGGGTGTTGCCAGCCCT
CCAGATGGGGCCAGAAGAGCGGGGGGAGCACAGCCCTGAGTCGCCATCTGTGGGTGAGGGCCCCCAAGGTGTCACC
AGCATGCCCTCCTCAATGTGGAGCGGCCAAGCTTCCGTTAACCTCCACTTCCAGGCCCAAGCCCAGTATCCCT
GAGGAGCACAGACAGGCAATTCAGAAAGTGAAGCTGAAGACCAGGAACGGGAACCCCAAGTGCCACTGTCTCC
CCAGGCCAGATTCCAGAGAGTGACCCTGCAGACCTGAGCCCAAGGGATACTCCACAAGGAGAAGACATGCTGAAC
GCCATCCGAAGGGCGTGAAACTGAAGAAGACCACGACAAACGATCGCTCAGCCCTCGCTTTTCTTAGGTTTAC
AAGAAATGCGCCGGTGGGGAATGAAGTGTTCATTAATAAAACCTAATTTGTCTTGATCCATTCCACTCTATAAT
AAAACAAAAGATTTTGTAGGCAACTCGGAATATAGCTCTTTTGAAGTACTCGACACCTTTAGATAAGAATTAA

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FIGURE 279B

ACCAACCTATGTAAGTACATAATCTTGATCTTTAATTTGTAAATATTGACAATTTTCTTTCTGCACATTTTAA
TCTTAGTTTCCCTTTTGATTTTTCTGAAGGTGCCAAATTCATTAACTTTTTTACAAGTCTTTGTAAAATTTA
AATGCATAAAGGGGGTTGGGGCAGGGGAACACGAAAGTAGTTAATTTAGAAAAGGATTTACTATACTTCACTCT
TCTTTTTTTTTCCCAAGCTTTTGTAGATGCATTGTAGTAGTCTAGCTTAGAAGCAAATGCAAGTTATTTTAA
TGTACAACTAAATGGGTAAGAGGTAAAATCTTCATTTAAATATACTATGTTCTGGATGAAAAGAGCAGGAGTAA
CAATTGATGAGCAATATTCAGAGTGAAGTAAATCTGGAAATGGTAGACTGTGTTGGGATTGGGGGGAGGGCCATG
GGAGGGGTACATCGTCAACATAGCCGATCCTGTTACATTTAAGAGTAGCCTCGTAGGTTGAATTTCTTCTGGTAG
CTTCATGGTAAATGCATCCGAATAAGCCATACTGGATTGCAGTGTTTGTCTGTAGGGTGTAAAGGACTTGAC
TTCCTTTCTCCCATGATTCTCTGGACTGCACACAGCACCCACAACCAGCCCCATGCATGCTGCTGCCTCTGGGC
AGTCGTAGAATCTCCCACTTCAGTTTCTCGTTGATTGTACTCACCTTTATGGAATCCAAATACATCCAAAAGGGT
AAGGCAGTTTAAAAATGTGAAAACATTTAAAAATGATAATAGCAGGGAATTCCTAGATTATAGTAAATGCCTTT
TACTTAACTGTGCCAGCAGGCTGGGTGCGTTAAAAAGCCCAAGTATTTGAAAAAAGTCTGAACAGATTTGACAA
GGGTAGCCAGCTTGAGTCTAGCAACTTGCCAATGTGTTTACCAATCTGGGGGCTTGTTTTCTTTCTTTCTTTTCT
AAATAATGGCAGTTAACTGGCTTTACAGTAAACATTGAAGAGAGGAGGATTTGTTTATTGTCACTGGGAATCTG
ACCACTATACTGTCCTTTTTTTGTATTCTGGGTAAATGTTTTTGGAAAAGATTTGTCTTTTCTAAGTGAAGTTA
AATTTGTTATACTGCCCATCCCCTAAAGCCAACAGAGATTTGTAGATTTAAAGGGATCACATTTGAAGACAATAG
TGTTTAAGAAAGCAAGCAAGTCCCTTAGCAGTCAGGTCATAACAGGGCACATTTCTGACCGAACCTCTCAAGGC
AGAGGAGGAGTTTGGTGGGTTTCATACACCCTGCAGATTCCTGTTGGCTCTAACCCTCAATTACCTAATCTTATG
CTTTAACACATAACTGCATTGGATGTGAGAGTAACGTACCGTATGGTCATTGTTCTATATATTAACATTGAACAC
TGCTGCGATTGCTCAAGGACATTTTATGTTACGGCTTTAAAGCAAAGGCATGATTATTAGAAACTATTTAAGCTT
TTTTCTTTGAAAAACAAGCTTCTTTTACAGAATATAAACAAACAGTAGTGCCTGTGGTTTAGCCACCAATCTTGA
TGACTAAAAGTAGCTGATGCATTGTGCATATGATGCTTGAGATGGTTTTTGCAAAAGCAGAAATCGCTGCAAGGT
AATCACAAATAGATAAAAAGTGGTATTTTAAACCTTTGAAATAAATGGATGTAAGTGTACCTTGGTACAGCTTTTCA
CTTGTTTAGTTTTTAAACGTTAGTATAATCTGAATAAATAAATGTTGCCAAATTCATGTAGAAAGAATGTGAC
AACACACCTTGGGTAGTTCTGCTTGTTGTTTTTGCATATTGTAAAAGCAGTGTACAGCTAAAAAGAAAGAAATCG
TTTCTAACAGTAAATTATTGTGCTTTAGTTGCTAGTTTGTACTGAGAGTTGACCTCTCCCTGTGCAGTTTTTTGT
TCTAAACTTGTATAAATAACAATTGTGTAATGTGTCTCCCTCCTACATTGTAACAATTGCTTCAGCCTACGTTAT
AAATAAAGAACCCTAGATT

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FIGURE 280

MFPSSQIPSWKDWAKPGPYDQPLVNTLQRRKEKREPDNPGGGPTTASGPPAAAEAAQRPRSM TVSAATRPGEEME
ACEELALALSRGLQLDTQRSSRDSLQCSSGYSTQTTTPCCSEDTIP SQVSDYDYFSVSGDQEADQQEFDKSSTIP
RNSDISQSYRRMFQAKRPASTAGLP TTLGPAMVTPGVATIR RTPSTKPSVRRGTIGAGPIPIKTPVIPVKTPTVP
DLPGVLPAPPDGPEERGEHSPESP SVGEGPQGVTSMPSSMWSGQASVNPPLPGPKPSIPEEHRQAIP ESEAEDQE
REPPSATVSPGQIPESDPADLSPRDT PQGEDMLNAIRRGVCLKKTTTNDRSAPRFS

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FIGURE 281

CGTCCTTCCTCAGCCGCGGGTGATCGTAGCTCGGAAATGGCGGGATTTGGTGCTATGGAGAAATTTTTGGTAGAA
TATAAGAGTGCAGTGGAAGAAGAACTGGCAGAGTACAAATGTAACACCAACACAGCAATTGAACTAAAATTAGTT
CGTTTTCTGAAGATCTTGAAAATGACATTAGAAGCTTTCTTTCTGAGTATACCCATCAACTCTTTGGGGATGAT
GAAACTGCTTTTGGTTACAAGGGTCTAAAGATCCTGTTATACTATATTGCTGGTAGCCTGTCAACAATGTTCCGT
GTTGAATATGCATCTAAAGTTGATGAGAACTTTGACTGTGTAGAGGCAGATGATGTTGAGGGCAAAATTAGACAA
ATCATTCCACCTGGATTTTGCACAAACACGAATGATTTCCCTTTCTTTACTGGAAGGAAGTTGATTTCAAGCCA
TTCGGAACCTTACTTCATACCTACTCAGTTCTCAGTCCAACAGGAGGAGAAAACCTTTACCTTTCAGATATATAAG
GCTGACATGACATGTAGAGGCTTTCGAGAATATCATGAAAGGCTTCAGACCTTTTGTATGTGGTTTATTGAAACT
GCTAGCTTTATTGACGTGGATGATGAAAGATGGCACTACTTTCTAGTATTTGAGAAGTATAATAAGGATGGAGCT
ACGCTCTTTGCGACCGTAGGCTACATGACAGTCTATAATTACTATGTGTACCCAGACAAAACCCGGCCACGTGTA
AGTCAGATGCTGATTTTGAAGTCCATTTCAAGGTCAAGGCCATGGTGCTCAACTTCTTGAAACAGTTCATAGATAC
TACACTGAATTTTCTACAGTTCTTGATATTACAGCGGAAGATCCATCCAAAAGCTATGTGAAATTACGAGACTTT
GTGCTTGTGAAGCTTTGTCAAGATTTGCCCTGTTTTTCCCGGGAAAAATTAATGCAAGGATTCAATGAAGATATG
GCGATAGAGGCACAACAGAAAGTTCAAAATAATAAGCAACACGCTAGAAGGGTTTATGAAATTCCTTCGACTACTG
GTAAGTACATGAGTGATGCCGAACAATACAGAAGCTACAGACTGGATATTAAAAGAAGACTAATTAGCCCATAT
AAGAAAAAGCAGAGAGATCTTGCTAAGATGAGAAAATGTCTCAGACCAGAAGAACTGACAAACCAGATGAACCAA
ATAGAAATAAGCATGCAACATGAACAGCTGGAAGAGAGTTTTTCAGGAAGTGTGGAAGATTACCGGCGTGTTATT
GAACGACTTGCTCAAGAGTAAAGATTATACTGCTCTGTACAGGAAGCTTGCAAAATTTCTGTACAATGTGCTGTG
AAAAATCTGATGACTTTAATTTTAAAATCTTGTGACATTTTGCTTATACTAAAAGTTATCTATCTTTAGTTGAAT
ATTTTCTTTTGGAGAGATTGTATATTTTAAAATACTGTTTAGAGTTTATGAGCATATATTGCATTTAAAGAAAGA
TAAAGCTTCTGAAATACTACTGCAATTGCTTCCCTTCTTAAACAGTATAATAAATGCTTAGTTGTGAT

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FIGURE 282

MAGFGAMEKFLVEYKSAVEKKLAEYKCNNTNTAIELKLVRFPEDLENDIRTFPEYTHQLFGDDETAFGYKGLKIL
LYYIAGSLSTMFRVEYASKVDENFDCVEADDVEGKIRQIIPPGFCTNTNDFLSLLEKEVDFKPFGTLLHTYSVLS
PTGGENFTFQIYKADMTCRGFREYHERLQTFLMWFJETASFIDVDDERWHYFLVFEEKYKNDGATLFATVGYMTVY
NYYVYPDKTRPRVSQMLILTPFQQQGHGAQLLETVHRYYTEFPTVLDITAEDPSKSYVKLRDFVLVKLCQDLPCF
SREKLMQGFNEDMAIEAQQKFKINKQHARRVYEILRLLVTDMSDAEQYRSYRLDIKRRLISPYKKKQORDLAKMRK
CLRPEELTNQMNQIEISMQHEQLEESFQELVEDYRRVIERLAQE

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FIGURE 283A

GAATTCGGCACGAGGCCATTGAATCCCAGTCCTAACAGAAGTACTGCGAATCTTGTGGCCTCATTCTGAACAAAA
GGGATTAGAGAAGAAAAATCTCTTGATATAAGGCTTGAAAGCAAGGGCAGGCAATCTTGGTTGTGAATATTTTCT
GATTTTTCCAGAAATCAAGCAGAAGATTGAGCTGCTGATGTCAGTTAACTCTGAGAAGTCGTCCTCTTCAGAAAG
GCCGGAGCCTCAACAGAAAGCTCCTTTAGTTCTCTCTCCACC GCCACCACCACCACCACCCTTTGCC
AGACCCACACCCCGGAGCCAGAGGAGGAGATCCTGGGATCAGATGATGAGGAGCAAGAGGACCCTGCGGACTA
CTGCAAAGGTGGATATCATCCAGTGAAAATTGGAGACCTCTTCAATGGCCGGTATCATGTTATTAGAAAGCTTGG
ATGGGGGCACTTCTCTACTGTCTGGCTGTGCTGGGATATGCAGGGGAAAAGATTTGTTGCAATGAAAGTTGTAAA
AAGTGCCACGATTATACGGAGACAGCCTTGGATGAAAATAAAATTGCTCAAATGTGTTGAGAAAGTGATCCCAG
TGACCCAAACAAAGACATGGTGGTCCAGCTCATTGACGACTTCAAGATTTAGGCATGAATGGGATACATGTCTG
CATGGTCTTTCGAAGTACTTGGCCACCATCTCTCAAGTGGATCATCAAATCCAATATCAAGGCCTCCCAGTACG
TTGTGTGAAGAGTATCATTTCGACAGGTCTTCAAGGGTTAGATTACTTACACAGTAAGTGCAAGATCATTTCATAC
TGACATAAAGCCGAAAATATCTTGATGTGTGTGGATGATGCATATGTGAGAAGAATGGCAGCTGAGCCTGAGTG
GCAGAAAGCAGGTGCTCCTCCTCTTCAGGGTCTGCAGTGAGTACGGCTCCACAGCAGAAACCTATAGGAAAAAT
ATCTAAAAACAAAAAGAAAAAAGTGAAGAAAGAAACAGAAAGAGGCAGGCTGAGTTATTGGAGAAGCGCCTGCAGGA
GATAGAAGAATTGGAGCGAGAAGCTGAAAGGAAAATAATAGAAGAAAACATCACCTCAGCTGCACCTTCCAATGA
CCAGGATGGCGAATACTGCCCAGAGGTGAAACTAAAAACAACAGGATTAGAGGAGGCGGCTGAGGCAGAGACTGC
AAAGGACAATGGTGAAGCTGAGGACCAGGAAGAGAAAAGATGCTGAGAAAAGAAAACATTGAAAAAGATGAAGA
TGATGTAGATCAGGAACCTGCGAACATAGACCCTACGTGGATAGAATCACCTAAAACCAATGGCCATATTGAGAA
TGGCCCATTTCTACTGGAGCAGCAACTGGACGATGAAGATGATGATGAAGAAGACTGCCCAAATCCTGAGGAATA
TAATCTTGATGAGCCAAATGCAGAAAGTGATTACACATATAGCAGCTCCTATGAACAATTCAATGGTGAATTGCC
AAATGGACGACATAAAATTCCCGAGTCACAGTTCCCAGAGTTTCCACCTCGTTGTTCTCTGGATCCTTAGAACC
TGTGGCCTGCGGCTCTGTGCTTTCTGAGGGATCACCCTTACTGAGCAAGAGGAGAGCAGTCCATCCCATGACAG
AAGCAGAACGGTTTCAGCCTCCAGTACTGGGGATTTGCCAAAAGCAAAAACCCGGGCAGCTGACTTGTGGTGAA
TCCCCTGGATCCGCGGAATCGAGATAAAATTAGAGTAAAAATTGCTGACCTGGGAAATGCTTGTGGGTGCATAA
ACACTTCACGGAAGACATCCAGACGCGTCAGTACCGCTCCATAGAGGTTTTAATAGGAGCGGGGTACAGCACCCC
TGCGGACATCTGGAGCAGGCGTGTATGGCATTGTAGCTGGCAACGGGAGATTATTTGTTTGAACCACATTCTGG
GGAAGACTATTCCAGAGACGAAGACCACATAGCCACATCATAGAGCTGCTAGGCAGTATTCCAAGGCACTTTGC
TCTATCTGGAAAATATTCTCGGGAATTCTTCAATCGCAGAGGAGAACTGCGACACATCACCAAGCTGAAGCCCTG
GAGCCTCTTTGATGTACTTGTGAAAAGTATGGCTGGCCCCATGAAGATGCTGCACAGTTTACAGATTTCTCTGAT
CCCGATGTTAGAAATGTTTCCAGAAAAACGAGCCTCAGCTGGCGAATGTCGGCATCCTTGGTTGAATTTCTTAGCA
AATTCTACCAATATTGCATTCTGAGCTAGCAAATGTTCCCAGTACATTGGACCTAAACGGTGACTCTCATTCTTT
AACAGGATTACAAGTGAGCTGGCTTCATCCTCAGACCTTTATTTTGTCTTGGAGTACTGTTGTTTGACATTTTGC
TTTTTGTGCACTGTGATCCTGGGGAAGGGTAGTCTTTTGTCTTCAGCTAAGTAGTTTACTGACCATTTTCTCTG
GAAACAATAACATGTCTCTAAGCATTGTTTCTTGTGTTGTGTGACATTCAAATGTCATTTTTTTGAATGAAAAAT
ACTTTCCCTTTGTGTTTTGGCAGGTTTTGTAACATTTATGAAGAAATATTTTAGCTGAGTACTATATAATTTA
CAATCTTAAGAAATTATCAAGTTGGAACCAAGAAATAGCAAGGAAATGTACAATTTTATCTTCTGGCAAAGGGAC
ATCATTCTGTATTATAGTGTATGTAAATGCACCCTGTAAATGTTACTTTCCATTAAATATGGGAGGGGGACTCA
AATTTAGAAAAGCTACCAAGTCTTGAGTGCTTTGTAGCCTATGTTGCATGTAGCGGACTTTAACTGCTCCAAGG
AGTTGTGCAAACTTTTCATTCCATAACAGTCTTTTCACATTGGATTTTAAACAAAGTGGCTCTGGGTTATAAGAT
GTCATTCTCTATATGGCACTTTAAAGGAAGAAAAGATATGTTTCTCATTCTAAAATATGCATTATAATTTAGCAG
TCCCATTGTGATTTTGCATATTTTAAAGTACTTTTAAAGAAGAGCAATTTCCCTTTAAAATGTGATGGCTC
AGTACCATGTGATGTTGCCTCCTCTGGGCGCTGTAAAGTAAAGCTCTACATAGATTAAATTTGGAGAAACGTGTAA
TTGTGTGGAATGAAAAATACATATATTTTGGAAAAGCATGATCATGCTTGTCTAGAACACAAGGTATGGTATA
TACAATTTGCAGTGCAGTGGGCAGAACTCTCACAGCTCAAAGATAACAGTGATCACATTTCATTCCATAGGTA
GCTTTACGTGTGGCTACAACAAATTTTACTAGCTTTTTCATTGTCTTTCCATGAAACGAAGTTGAGAAAATGATT
TTCCCTTTCAGGTTGCACACAGTTTTGTTTATGCATTTCTTAAATTAATTGTAGACTCCAGGATACAAACCA
TAGTAGGCAATACAATTTAGAATGTAATATATAGAGGTATATTAGCCTCTTTAGAAGTCAGTGGATTGAATGTCT
TTTTATTTTAAATTTTACATTCATTAAGGTGCCTCGTTTTTGACTTTGTCCATTAAACATTTATCCATATGCCTTT

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FIGURE 283B

GCAATAACTAGATTGTGAAAAGCTAACAAGTGTGTGAACAATAATCCATTGTTTGAGGTGCTTGCAGTTGTCTTA
AAAATTAAAGTGTGTTTTGGTTTTTTTTTTTCCAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTCCTGC

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FIGURE 284

MSVNSEKSSSSSERPEPQQKAPLVPPPPPPPPPPPLPDPTPPEPEEEILGSDDEEQEDPADYCKGGYHPVKIGD
LFNGRYHVIRKLGWGHFSTVWLCWDMQGKRFVAMKVVKSAQHYTETALDEIKLLKCVRESDPSPNKMVVLID
DFKISGMNGIHVCMVFEVLGHHLLKWI IKSNYQGLPVRCVKSII RQVLQGLDYLSKCKIIHTDIKPENILMCVD
DAYVRRMAAEPEWQKAGAPPPSGSAVSTAPQQKPIGKISKNNKKKKLKKKQKRQAEELLEKRLQEIEELEREAERKI
IEENITSAAPSNQDGEYCPEVKLKTGLEEAAEAETAKDNGEAEDQEEKEDAENIEKDEDDVDQELANIDPT
WIESPKTNNGHIENGPFSLQQLDDEDDDEEDCPNPEEYNLDEPNAESDYTYSSSYEQFN GELPNGRHKIPESQFP
EFSTSLFSGSLEPVACGSVLSEGSPLTEQEESSPSHDRSRTVSASSTGDLPKAKTRAADLLVNPLDPRNRDKIRV
KIADLGNACWVHKHFTEDIQTRQYRSIEVLIGAGYSTPADIWSTACMAFELATGDYLFEPHSGEDYSRDEDHIAH
IIELLGSIPRHFALSGKYSREFFNRRGELRHITKLKPWSLFDVLVEKYGWPHEAQAQFTDFLIPMLEMVPEKRAS
AGECRHPWLNS

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FIGURE 285

CCGGTGC GCCCGGCGGAGCGCGCGTGC GTGGCCAGCGCGCTCCCCGCTTCTGCTTGGCTTTCCGGCTTAATTTTC
CTCGGCGGGATTAAAGTTGGAATTGACCGGAGAATTGAGTTGCCGGGGAACAGAGCCCCGGCCGCCGCCAGAGC
GATGTTCCCCGCAGAGCCGGCACCCGACGCCGACCAGGCTGCAGGCCAGCCCTTCAAGTTCACTATCCCGGAGTC
CCTGGACCGGATTAAAGAGGAATTCAGTTCCCTGCAGGCGCAGTATCACAGCCTTAAATTGGAATGTGAGAACT
GGCAAGTGAAAAGACAGAAATGCAGAGGCACCTATGTGATGTATTATGAAATGTCATATGGATTAAACATTGAAAT
GCACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGCACAAGTCATCCCATTCTGTCTCAGGAACA
TCAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGACCATGGCAGAGTTGAATGCCATCATCGGGCA
GCAGCAGTTGCAAGCTCAGCATCTTTCTCATGGCCACGGACCCCCAGTTCCCCTTACGCCTCACCCCTTCGGGACT
TCAGCCTCCTGGAATCCCGCCCCCTCGGGGGCAGTGCCGGCCTTCTTGCGCTGTCCAGTGCTCTGAGTGGGCAGTC
TCACTTGGCAATAAAAGATGACAAGAAGCACACGATGCAGAGCACCCACAGAGACAGAGAGCCGGGCACAAGTAA
TTCCCTCCTGGTCCCAGACAGTCTAAGAGGCACAGATAAACGCAGAAATGGACCTGAATTTTCCAATGACATCAA
GAAAAGGAAGGTGGATGATAAGGACTCCAGCCACTATGACAGTGATGGTGACAAAAGCGATGACAACCTAGTTGT
GGATGTGTCTAATGAGGACCTTCTTCTCCGCGAGCAAGCCCTGCCCACTCGCCCCGGGAAAATGGAATCGACAA
AAATCGCCTGCTAAAGAAGGATGCTTCTAGCAGTCCAGCTTCCACGGCCTCCTCGGCAAGTTCCACTTCTTTGAA
ATCCAAAAGAAATGAGCTTGCATGAAAAGCCAGCACGCCTGTTCTGAAATCCAGCACACCAACGCCTCGGAGCGA
CATGCCAACGCCGGGCACCAGCGCCACTCCAGGCCTCCGTCCAGGTCTCGGCAAGCCTCCAGCCATAGACCCCCCT
CGTTAACCAAGCGGCAGCTGGCTTGAGGACACCCCTGGCAGTGCCCGGCCATATCCTGCTCCTTTTGGGATGGT
CCCCCACGCTGGCATGAACGGCGAGCTGACCAGCCCAGGCGCTGCCTACGCCAGTTTACACAACATGTGCCCCCA
GATGAGCGCCGCAGCGCCGCGCGCCGCGTGGTGGCCTACGGGCGCTCCCCATGGTGGGGTTTGATCCTCCCCC
TCACATGAGAGTACCTACCATTCTCCAAACCTGGCAGGAATCCCTGGGGGGAACCTGCATACTCCTTCCACGT
TACTGCAGACGGTCAGATGCAGCCTGTCCCTTTTCCCCCGACGCCCTCATCGGACCCGGAATCCCCGGCATGC
TCGCCAGATCAACACCCTCAACCACGGGGAGGTGGTGTGCGCTGTGACCATCAGCAACCCACAGACACGTGTA
CACAGGCGGGAAGGGCTGCGTCAAGGTCTGGGACATCAGCCACCCTGGCAATAAGAGCCCTGTCTCCAGCTCGA
CTGTCTGAACAGAGACAATTATATCCGTTCTGTAAATTGCTACCCGATGGCTGCACTCTCATAGTGGGAGGGGA
AGCCAGTACTTTGTCCATTGTTGGGACCTGGCGGCTCCAACCCCGCGCATCAAGGCGGAGCTGACGTCTCGGCCCC
CGCCTGTACGCCCTGGCCATCAGCCCCGATTCCAAGGTCTGCTTCTCATGCTGCAGCGACGGCAACATCGCTGT
GTGGGATCTGCACAACCAGACACTAGTGAGGCAATTCCAGGGCCACACAGACGGAGCCAGCTGTATTGACATTC
TAATGATGGCACCAAGCTCTGGACGGGTGGTTTGGACAACACAGTCAGGTCCTGGGACCTGCGCGAGGGGCGGCA
GCTGCAGCAGCAGACTTCACCTCCCAGATCTTCTCCCTGGGGTACTGCCCCACGGGGAGTGGCTGGCAGTGGG
CATGGAGAGCAGCAATGTGGAGGTGCTGCACGTGAACAAGCCTGACAAGTACCAGCTGCACCTGCATGAGAGCTG
CGTGCTGTCCCTGAAATTTGCTTACTGTGGTAAATGGTTTGTGAGTACTGGAAAAGATAACCTCCTCAATGCTTG
GCGGACCCCTATGGAGCCAGCATATTCCAGTCCAAAGAGTCCTCGTCAGTGCTTAGCTGTGACATCTCTGTGGA
TGATAAGTACATAGTCACTGGCTCGGGGGACAAGAAGGCTACAGTCTATGAAGTCATCTACT**GA**AAACATTATGT
GGTTTAACGTTTATAGTTGAATTGGGCCAAAATGTTTCGAATTTATAGAAATAGAAAAGTTGTAACCTTTAAAAGA
GAAAAAAATTAACAACACCTGTTTCAAACCTTGACAGAAAACCTTTTGAGTCTACAAAGAGGAGGGCGACAAG
TCCATCAGCAGAAAGTCACCTGTCTACATAGACCAAATGGAGCACCAAGGCCAAGCGACAGAGGGGCCATGGGT
TGTAGGATTGAGGAACGGAATCTGCCGACTCACATGACAGCCATTCTTTCTTTCTGGGTGATCTGGGGATCACG
CCTTGCCCAAGTGTGAGATTACCTTTCTGTTCCCTGCGAGTTCACCTCACTTTCCGTCCTTTGTAGAGCAGTGGTG
TCTCCAATGAACCTGTTTCTGGTTTTGCATCTTGTGAAATGTTTTTTTGTATTTTTTGTGTAAGGTTAAACATTT
GTATAAATTGTAAATATATTTGGTTTTATTACAGTAAAGGCTTTAGTACCAATAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAA

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FIGURE 286

MFPQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYYEMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAQVMTAELNAIIGQQQLQAQHLSHGHGPPVPLTPHPISGL
QPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHHDAEHHRDREPGTSSNLLVPDSLRTDKRRNGPEFSNDIK
KRKVDDKDSHYDSGDGKSDDNLVVDVSNEDPSSPRASPAHSPRENGIDKNRLLKKDASSSPASTASSASSTSLK
SKEMSLHEKASTPVLKSSTPTPRSDMPTPGTSATPGLRPGLGKPPAIDPLVNQAAAGLRTPPLAVPGPYAPFGMV
PHAGMNGELTSPGAAYASLHNMSFQMSAAAAAAVVAYGRSPMVGFDPHPHMRVPTIPPNLGIPGGKPAYSFHV
TADGQMOPVFPFPDALIGPGIPRHARQINTLNHGEVVCVAVTISNPTRHVYTGKGKCVKVWDISHPGNKSPVSQLD
CLNRDNYIRSKLLPDGCTLIVGGEASTLSIWDLAAPTPIKAELTSSAPACYALAI SPDSKVCFSCCSDGNIAV
WDLHNQTLVRQFQGHTDGASCIDISNDGTLKLTGGLDNTVRSWDLREGRQLQQHDFTSQIFSLGYCPTGEWLAVG
MESSNVEVLHVKNPKDKYQLHLHESCVLSLKFAYCGKWFVSTGKDNLLNAWRTPYGASIFQSKESSSVLSCDISVD
DKYIVTGSGDKKATVYEVY

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FIGURE 287

GGCACGAGGAGGAGAAGAGCAAAGAAAAGCAGTCCGTCTGGATTTGTTTGCCAGGACTGGCGCCGCGCACGCGG
ATCGCCGAGGGGAGTGCAGGTCGGAGTCACCGCGCCCCCGCCTCCCCGCGCGGGCAGCTGAGGCCGGGGGTTGGAG
CGCTGCCCCCGCGCACAGTCCCCGAGCGCCCGACGTCTCCGCGCAGGTTCTTGAAGCAGCTGGGCCTGGGGCGCC
CACTAATGTGGCCCTGAGGGCCGGAGCCCGCACCCGACGGGAGCGGGAGCCGGAGCAGCTGCGGGCGCCGAGTGGC
CGGTGCGCCCCGGCGGAGCGCGCTGCGTGGCCAGCGCGCTCCCCGCTTCTGCTTGGCTTTCCGGCTTAATTTTCC
TCGGCGGGATTAAAGTTGGAAATTGACCGGAGAATTGAGTTGCCGGGAACAGAGCCCCGGCCGCCAGAGCG
ATGTTCCCGCAGAGCCGGCACCCGACGCCGACAGGCTGCAGGCCAGCCCTTCAAGTTCACATATCCCGGAGTCC
CTGGACCGGATTAAAGAGGAATTCCAGTTCCTGCAGGCGCAGTATCACAGCCTTAAATTGGAATGTGAGAACTG
GCAAGTGAAAAGACAGAAATGCAGAGGCACTATGTGATGTATTATGAAATGTCATATGGATTAAACATTGAAATG
CACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGCACAAGTCATCCCATTTCTGTCTCAGGAACAT
CAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGACCATGGCAGAGTTGAATGCCATCATCGGGCAG
CAGCAGTTGCAAGCTCAGCATCTTTCTCATGGCCACGGACCCCCAGTTCCCTTACGCCTCACCTTCGGGACTT
CAGCCTCCTGGAATCCCCGCCCTCGGGGGCAGTGCCGGCCTTCTTGCGCTGTCTAGTGCTCTGAGTGGGCAGTCT
CACTTGGCAATAAAAGATGACAAGAAGCACACGATGCAGAGCACACAGAGACAGAGAGCCGGGCACAAGTAAT
TCCCTCCTGGTCCCAGACAGTCTAAGAGGCACAGATAAACGCAGAAATGGACCTGAATTTTCCAATGACATCAAG
AAAAGGAAGGTGGATGATAAGGACTCCAGCCACTATGACAGTGATGGTGACAAAAGCGATGACAACCTTAGTTGTG
GATGTGTCTAATGAGGACCTTCTTCTCCGCGAGCAAGCCCTGCCACTCGCCCCGGGAAAATGGAATCGACAAA
AATCGCCTGCTAAAGAAGGATGCTTCTAGCAGTCCAGCTTCCACGGCCTCCTCGGCAAGTTCCACTTCTTTGAAA
TCCAAAGAAATGAGCTTGATGAAAAAGCCAGCACGCCTGTTCTGAAATCCAGCACACCAACGCCTCGGAGCGAC
ATGCCAACGCCGGGCACCAGCGCCACTCCAGGCCTCCGTCCAGGTCTCGGCAAGCCTCCAGCCATAGACCCCTC
GTTAACCAAGCGGCAGCTGGCTTGAGGACACCCCTGGCAGTGCCCGGCCCATATCCTGCTCCTTTTGGGATGGTC
CCCCACGCTGGCATGAACGGCGAGCTGACCAGCCAGGCGCTGCCTACGCCAGTTTACACAACATGTGCCCCAG
ATGAGCGCCGAGCCGCCCGCGCGCCGCTGGTGGCCTACGGGCGCTCCCCCATGGTGGGGTTTGATCCTCCCCCT
CACATGAGAGTACCTACCATTCTCCAAACCTGGCAGGAATCCCTGGGGGGAAACCTGCATACTCCTTCCACGTT
ACTGCAGACGGTCAGATGCAGCCTGTCCCTTTTCCCCCGACGCCCTCATCGGACCCGGAATCCCCGGCATGCT
CGCCAGATCAACACCCCTCAACCACGGGGAGGTGGTGTGCGCTGTGACCATCAGCAACCCACGAGACACGTGTAC
ACAGGCGGGAAGGGCTGCGTCAAGGTCTGGGACATCAGCCACCCCTGGCAATAAGAGCCCTGTCTCCAGCTCGAC
TGCTGTAACAGAGACAATTATATCCGTTCTGTAAATTGCTACCCGATGGCTGCATCTCATAGTGGGAGGGGAA
GCCAGTACTTTGTCCATTTGGGACCTGGCGGCTCCAACCCCGCGCATCAAGGCGGAGCTGACGTCTCGGCCCCC
GCCTGCTACGCCCTGGCCATCAGCCCCGATTCCAAGGTCTGCTTCTCATGCTGCAGCGACGGCAACATCGCTGTG
TGGGATCTGCACAACCAGACACTAGTGAGGCAATTCCAGGGCCACACAGACGGAGCCAGCTGTATTGACATTTCT
AATGATGGCACCAAGCTCTGGACGGGTGGTTTGGACAACACAGTCAGGTCTTGGGACCTGCGCGAGGGGCGGCAG
CTGCAGCAGCACGACTTCACCTCCAGATCTTCTCCCTGGGGTACTGCCCCACCGGGGAGTGGCTGGCAGTGGGC
ATGGAGAGCAGCAATGTGGAGGTGCTGCACGTGAACAAGCCTGACAAGTACCAGCTGCACCTGCATGAGAGCTGC
GTGCTGTCCCTGAAATTTGCTTACTGTGGTAAATGGTTTGTGAGTACTGGAAAAGATAACCTCCTCAATGCTTGG
CGGACCCCTATGGAGCCAGCATATTCCAGTCCAAAGAGTCTCTGTCAGTGCTTAGCTGTGACATCTCTGTGGAT
GATAAGTACATAGTCACTGGCTCGGGGGACAAGAAGGTACAGTCTATGAAGTCATCTACT**TG**AAAACATTATGTG
GTTTAACGTTTATAGTTGAATTGGGCCAAAATGTTTCGAATTTATAGAAATAGAAAAGTTGTAACTTTAAAAGAG
AAAAAAATTACAAACACCTGTTTCCAAACCTTGACAGAAAACCTTGTGAGTCTACAAAGAGGAGGCGACAAGT
CCATCAGCAGAAAGTCACCTGTCTACATAGACCAATGGAGCACCAAGGCCAAGCGGACAGAGGGGCCATGGGTT
GTAGGATTGAGGAACGGAATCTGCCGACTCACATGACAGCCCCATTCTTTCTTTCTGGGTGATCTGGGGATCACGC
CTTGCCCAAGTGTGAGATTACCTTTCTGTTCTTGCAGTTCACCTCACTTTCCGTCTTTGTAGAGCAGTGGTGT
CTCCAATGAACCTGTTTCTGGTTTTGTCATCTTGTGAAATGTTTTTTTGTATTTTTGTGTAAGGTTAAACATTTG
TATAAATTGTAAATATATTGGTTTTATTACAGTAAAGGCTTTAGTACCAATAAAAAAAAAAAAAAAAAA

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FIGURE 288

MFPQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYYEMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAQVMTAELNAIIGQQQLQAQHLSHGHGPPVPLTPHP SGL
QPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHHDAEHHRDREP GTSNSLLVPDSL RGTDKRRNGPEFSNDIK
KRKVDDKDSSHYDSDGDKSDDNLVVDVSNEDPSSPRASPAHSPRENGIDKNRLLKKDASSSPASTASSASSTSLK
SKEMSLHEKASTPVLKSSTPTPRSDMPTPGTSATPGLRPGLGKPPAIDPLVNQAAAGLRTPLAVPGPYAPFGMV
PHAGMNGELTSPGAAYASLHNMS PQMSAAAAAAAVVAYGRSPMVGFDPFPHMRVPTIPP NLAGIPGGKPAYSFHV
TADGQM QPVFPFPDALIGPGIPRHARQINTLNHGEVVCAVTISNPTRHVYTGKGKCVKVDISHPGNKSPVSQLD
CLNRDNYIRSKLLPDGCTLIVGGEASTLSIWDLAAPT PRIKAELTSSAPACYALAI SPDSKVCFSCCSDGNI AV
WDLHNQTLVRQFQGHTDGASCIDISNDGTKLWTGGLDNTVRSWDLREGRQLQQHDFTSQIFSLGYCPTGEWLAVG
MESSNVEVLHV NKPDKYQLHLHESCVLSLKFAYCGKWFVSTGKDNLLNAWRTPYGASIFQSKESSVLSCDISVD
DKYIVTGSGDKKATVYEVIIY

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FIGURE 289A

CTACTACAGTGGCGGACGTACAGGACCTGTTTCACTGCAGGGGGATCCAAAACAAGCCCCGTGGAGCAACAGCCA
GAGCAACAGCAGCTGCAAGACATTGTTTCTCTCCCTCTGCCCCCCTTCCCCACGCAACCCAGATCCATTTACA
CTTTACAGTTTTTACCTCACAAAACTACTACAAGCACCAAGCTCCCTGATGGAAAGGAGCATCGTGCATCAAGTC
ACCAGGGTGGTCCATTCAAGCTGCAGATTTGTTTGTATCCTTGTACAGCAATCTCCTCCTCCACTGCCACTACA
GGGAAGTGCATCACATGTCTAGCATACTGGAGCATAGTGAAAGAGTCTATTTTGAAGCTTCAAACCTTAGTGCTGCT
GCAGACCAGGAACAAGAGAGAAAGAGTGGATTTCAGCCTGCACGGATGGTCTTGAAACACAAATGGTTTTTGGTC
TAGGCGTTTTTACACTGAGATTCTCCACTGCCACCCTTTCTACTCAAGCAAATCTTCGTGAAAAGATCTGCTGCA
AGGAAGTATAGCTTATGGTTCTCCATTGTGATGAAAGCACATGGTACAGTTTTTCAAAGAAATTAGACCATTTT
CTTCGTGAGAAAGAAATCGACGTGCTGTTTTCATAGGGTATTTCTCACTTCTCTGTGAAAGGAAGAAAGAACAG
CCTGAGCCCAAGAGCCCTCAGGAGCCCTCCAGAGCCTGTGGGAAGTCTCCATGGTGAAGTATAGGCTGAGGCTAC
CTGTGAACAGTACGCAGTGAATGTTTCATCCAGAGCTGCTGTTGGCGGATTGTACCCACGGGGAGATGATTCTCA
TGAAGAGCCTGGATCCCTACAGAAATCAAATGTGACTTTCCGTTTATCAGACTAAAATCAGAGCCATCCAGACA
GTGAAACAGTACCCTGGAGGGGGGACGGCGAAAAATGAAATCCAACCAAGAGCGGAGCAACGAATGCCTGCCTC
CCAAGAAGCGGAGATCCCCGCCACCAGCCGGTCTCCGAGGAGAAGGCCCTACCCTGCCAGCGACAACCACC
GGGTGGAGGGCACAGCATGGCTCCCGGGCAACCCTGGTGGCCGGGGCCACGGGGGCGGGAGGCATGGGCCGGCAG
GGACCTCGGTGGAGCTTGGTTTACAACAGGGAATAGGTTTACACAAAGCATTGTCCACAGGGCTGGACTACTCCC
CGCCAGCGCTCCCAGGTCTGTCCCGTGGCCACCACGCTGCCTGCCGCTACGCCACCCCGCAGCCAGGGACCC
CGGTGTCCCCCGTGCAGTACGCTCACCTGCCGCACACCTTCCAGTTCATTGGGTCTCCCAATACAGTGGAACCT
ATGCCAGCTTCATCCCATCACAGCTGATCCCCCAACCGCCAACCCCGTCACCAGTGCAGTGGCCTCGGCCGCAG
GGGCCACCACTCCATCCCAGCGCTCCCAGCTGGAGGCCTATTCCACTCTGCTGGCCAACATGGGCAGTCTGAGCC
AGACGCCGGGACACAAGGCTGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC
AGC
CCCCCACCAGCCAGCAGAACAGTACGTCCACATTTCCAGTTCTCCGCAGAACACCGGCCGCACCGCCTCTC
CTCCGGCCATCCCCGTCCACCTCCACCCCCACCAGACGATGATCCCACACACGCTCACCTGGGGCCCCCTCCC
AGGTGCTCATGCAATACGCCGACTCCGGCAGCCACTTTGTCCCTCGGGAGGCCACCAAGAAAGCTGAGAGCAGCC
GGCTGCAGCAGGCCATCCAGGCCAAGGAGGTCTGAACGGTGAGATGGAGAAGAGCCGGCGGTACGGGGCCCCGT
CCTCAGCCGACCTGGGCCTGGGCAAGGCAGGCGGCAAGTCGGTTCTCACCCTACGAGTCCAGGCACGTGGTGG
TCCACCCGAGCCCCCTCAGACTACAGCAGTCTGTATCCTTCGGGGGTCCGGGCCTCTGTGATGGTCTGCCAACA
GCAACACGCCCCGAGCTGACCTGGAGGTGCAACAGGCCACTCATCGTGAAGCCTCCCCCTTCTACCCTCAACGACA
AAAGTGGCCTGCATTTAGGGAAGCCTGGCCACCGGTCTACGCGCTCTCACCCACACGGTCATTAGACCACAC
ACAGTGCTTCAGAGCCACTCCCGGTGGGACTGCCAGCCACGGCCTTCTACGCAGGGACTCAACCCCTGTATCG
GCTACCTGAGCGGCCAGCAGCAAGCAATCACCTACGCCGCGAGCCTGCCCCAGCACCTGGTGATCCCCGGCACAC
AGCCCCGTGCTCATCCCGGTCCGCGAGCACTGACATGGAAGCGTCGGGGGAGCCCCGGCCATAGTCACGTATCCC
CCCAGTTTGCTGCAGTGCTCACACGTTCTGTACACCGCCCTTCCCAAGAGCGAGAACTTCAACCTGAGGCCC
TGGTACCCAGGCCGCTACCCAGCCATGGTGCAGGCCAGATCCACCTGCCTGTGGTGCAGTCCGTGGCCTCCC
CGGCGGGCTCCCCCTACGCTGCCTCCCTACTTCATGAAAGGCTCCATCATCCAGTTGGCCAACGGGGAGCTAA
AGAAGGTGGAAGACTTAAAAACAGAAGATTTATCCAGAGTGCAGAGATAAGCAACGACCTGAAGATCGACTCCA
GCACCGTAGAGAGGATTGAAGACAGCCATAGCCCGGGCGTGGCCGTGATACAGTTTCGCCGTGGGGAGCACCGAG
CCCAGGTACGCGTTGAAGTTTTGGTAGAGTATCCTTTTTTGTGTTTGGACAGGGCTGGTTCATCCTGTCTCCGG
AGAGAACCAGCCAGCTCTTTGATTTGCCGTGTTCCAACTCTCAGTTGGGGATGTCTGCATCTCGCTTACCCTCA
AGAACCTGAAGAACGGCTCTGTAAAAAGGGCCAGCCCGTGGATCCCGCCAGCGTCTGCTGAAGCACTCAAAGG
CCGACGGCCTGGCGGGCAGCAGACACAGGTATGCCGAGCAGGAAAACGGAATCAACCAGGGGAGTGCCAGATGC
TCTCTGAGAATGGCGAACTGAAGTTTCCAGAGAAAATGGGATTGCCTGCAGCGCCCTTCTCACCAAAATAGAAC
CCAGCAAGCCCGCGGCAACGAGGAAGAGGAGGTGGTCCGGCGCCAGAGAGCCGCAAACTGGAGAAGTCAGAAGACG
AACCACCTTTGACTCTTCTAAGCCTTCTCTAATTCTCAGGAGGTTAAGATTTGCATTGAAGGCCGGTCTAATG
TAGGCAAGTAGAGGACGCTGGGGGAAAGGAAACGTGGCTCTCCCTTATCATTTGTATCCAGATTACTGTACTGT
AGGCTAAAATAACACAGTATTTACATGTTATCTTCTAATTTTAGGTTTCTGTTCTAACCTTGTCAATTAGAGTTA
CAGCAGGTGTGTGCGAGGAGACTGGTGCATATGCTTTTTCCACGAGTGTCTGTGAGTGCAGGGGCGGGAGGAAG

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FIGURE 289B

GCACAGCAGGAGCGGTCCAGGGCTCCAGGCATCCCCGGGGAAGAAAGGAACGGGGCTTCACAGTGCCTGCCTTCTC
TAGCGGCACAGAAGCAGCCGGGGGCGCTGACTCCCGCTAGTGTTCAGGAGAAAAGTCCCCTGGGAAGAGTCCCTGCA
GGGGTGCAGGGTTGCACGCATGTGGGGGTGCACAGGCGCTGTGGCGGCGAGTGAGGGTCTCTTTTTCTCTGCCTC
CCTCTGCCTCACTCTCTTGCTATCGGCATGGGCCGGGGGGGTTTCAGAGCAGTGTCTCTGGGGTTCCCACGTGC
AAAATCAACATCAGGAACCCAGCTTCAGGGCATCGCGGAGACGCGTCAGATGGCAGATTTGGAAAGTTAACCATT
TAAAGAACATTTTTCTCTCCAACATATTTTACAATAAAAGCAACTTTTAATTGTATAGATATATATTTCCCCCT
ATGGGGCCTGACTGCACTGATATATATTTTTTTTTTAAAGAGCAACTGCCACATGCGGGATTTCAATTTCTGCTTTTT
ACTAGTGCAGCGATGTACACAGGGTGTGTGGTGGACAGGGAAGCCCCCTGCTGTTCATGGCCCCACATGGGGTAAG
GGGGTTGGGGGTGGGGGAGAGGGAGAGCGAACACCCACGCTGGTTTCTGTGCAGTGTAGGAAAACCAATCA
GGTTATTGCATTGACTTCACTCCCAAGAGGTAGATGCAAACTGCCCTTCAGTGAGAGCAACAGAAGCTCTTCACG
TTGAGTTTGCAGAAATCTTTTTGTCTTTGAACTCTAGTACTGTTTATAGTTCATGACTATGGACAACCTCGGGTGCC
ACTTTTTTTTTTTTCAGATTCCAGTGTGACATGAGGAATTAGATTTTGAAGATGAGCATATATTACTATCTTTAA
GCATTTAAAAATACTGTTTCACTTTATTACCAAGCATCTTGGTCTCTCATTCAACAAGTACTGTATCTCACTTT
AAACTCTTTGGGGAAAAAACAAAAACAAAAAACTAAGTTGCTTTCTTTTTTTCAACACTGTAACTACATTTCA
GCTCTGCAGAATTGCTGAAGAGCAAGATATTGAAAGTTTCAATGTGGTTTAAAGGGATGAATGTGAATTATGAAC
TAGTATGTGACAATAAATGACCACCAAGTACTACCTGACGGGAGGCACTTTTCACTTTGATGTCTGAGAATCAGT
TCAAGGCATATGCAGAGTTGGCAGAGAACTGAGAGAAAAGGGATGGAGAAGAGAATACTCATTTTTGTCCAGTG
TTTTCTTTTTTAAAGATGAACTTTAAAGAACCTTGCGATTGTGCACATATTGAGTTTATAACTTGTGTGATATTCC
TGCAGTTTTTATCCAATAACATTGTGGGAAAGGTTTGGGGGACTGAACGAGCATAAATAAATGTAGCAAAATTTTC
TTTCTAACCTGCCTAAACTCTAGGCCATTTTATAAGGTTATGTTCTTTGAAAATTCATTTTGGTCTTTTTTACCA
CATCTGTCAAAAAAGCCAGGTCTTAGCGGGCTCTTAGAACTCTGAGAATTTTCTTCAGATTTCATTGAGAGAGT
TTTCCATAAAGACATTTATATATGTGAGCAAGATTTTTTTTTTAAACAATTACTTTATTATTGTTGTTATTAATGTT
ATTTTCAGAATGGCTTTTTTTTTTCTATTCAAATCAAATCGAGATTTAATGTTTGGTACAAACCCAGAAAGGGTA
TTTCATAGTTTTTTAAACCTTTTCACTCCAGAGATCCGAAATATCATTGTGGGTTTTGAATGCATCTTTAAAGTG
CTTTAAAAAAAAGTTTTATAAGTAGGGAGAAATTTTTTAAATATTCTTACTTGGATGGCTGCAACTAAACTGAACA
AATACCTGACTTTTCTTTTACCCCATTTGAAATAGTACTTTCTTCGTTTCACAAATTAAAAAAAATCTGGTAT
CAACCCACATTTTGGCTGTCTAGTATTCAATTTACATTTAGGGTTACCAGGACTAATGATTTTTTATAAACCGTTT
TCTGGGGTGTACCAAAAACATTTGAATAGGTTTGAATAGCTAGAATAGTTCTTGAATTTCTCTCGAATTTTCAAT
ACCCTCTCAGCATGCTTGCAGAGAGCTGGGTGGGCTCATTCTTGCAGTCATACTGCTTATTTAGTGCTGTATTTT
TTAAACGTTTCTGTTTCAGAGAACTTGCTTAATCTTCCATATATTCTGCTCAGGGCACTTGCAATTATTAGGTTTT
GTTTTCTTTTTGTTTTTTAGCCTTTGATGGTAAGAGGAATACGGGCTGCCACATAGACTTTGTCTCATTAAATA
TCACTATTTACAACCTCATGTGGACTCAGAAAAACACACACCACCTTTTGGCTTACTTCGAGTATTGAATTGACTG
GATCCACTAAACCAACACTAAGATGGGAAAACACACATGGTTTGGAGCAATAGGAACATCATCATAATTTTTGTG
GTTCTATTTCAGGTATAGGAATTATAAAATAAATTGGTTCTTTCTAAACACTTGTCCCATTTTCACTCTCTGCTTT
TTTAGCATGTGCAATACTTTCTGTGCCAATAGAGTCTGACCAGTGTGCTATATAGTTAAAGCTCATTCCCTTTTG
GCTTTTCTTGTGTTGGTTGATCTTCCCATTTCTGGCCAGAGCAGGGCTGGAGGGAAGGAGCCAGGAGGGAGAGA
GCCTCCACCTTTCCCTGCTGCGGATGCTGAGTGTCTGGGGCGGGGAGCCTTCAGGAGCCCCGTGCGTCTGCCGC
CACGTTGCAGAAAGAGCCAGCCAAGGAGACCCGGGGGAGGAACCGCAGTGTCCCCTGTCACCACACGGAATAGTG
AATGTGGAGTGTGGAGAGGAAGGAGGCAGATTCATTTCTAAGACGCACTCTGGAGCCATGTAGCCTGGAGTCAAC
CCATTTTCCACGGTCTTTTCTGCAAGTGGGCAGGCCCTCCTCGGGGTCTGTGTCCTTGAGACTTGGAGCCCTGC
CTCTGAGCCTGGACGGGAAGTGTGGCCTGTTGTGTGTGTGCGTTCTGAGCGTGTGGCCAGTGGCTGTGGAGGGG
ACCACCTGCCACCCACGGTCACCACTCCCTTGTGGCAGCTTTCTCTTCAAATAGGAAGAACGCACAGAGGGCAGG
AGCCTCCTGTTTGCAGACGTTGGCGGGCCCCGAGGCTCCCAGAGCAGCCTCTGTACCCGCTTCTGTGTAGCAAAC
ATTAACGATGACAGGGGTAGAAATTTCTCGGTGCCGTTTCAGCTTACAAGGATCAGCCATGTGCCTCTGTACTATG
TCCACTTTGCAATATTTACCGACAGCCGTCTTTTGTCTTTCTTTCTTCTGTTTCCATTTTTTAAACTAGTAACAGC
AGGCTTTTGCCTTTACAATGGAACACAATCACCAGAAATTAGTCAGGGCGAAAAGAAAAAATAATACTATTA
ATAAGAAACCAACAAACAAGAACCTCTCTTTCTAGGGATTCTAAATATATAAAATGACTGTTCTTGTAGATGTT
TAACTTAAGAATTATTTAGTTTGTCTGGGCCACACTGGGGCAGAGGGGGAGGGAGGGATACAGAGATGGATGC

[illegible]

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FIGURE 290

MKSNQERSNECLPPKKREIPATSRSEEKAPTLPSDNHRVEGTAWLPGNPGRGHGGGRHGPAGTSVELGLQQGI
GLHKALSTGLDYSPPSAPRSVPVATTLPAAYATPQPGTPVSPVQYALPHTFQFIGSSQYSGTYASFIPSQQLIPP
TANPVTSAVASAAGATTPSQRSQLEAYSTLLANMGSLSQTPGHKAEQQQQQQQQQQQQHQQQQQQQQQQQQQQ
QHLSRAPGLITPGSPPPAQQNQYVHISSSPQNTGRTASPPAIPVHLHPHQTMIPTLTLGPPSQVVMQYADSGSH
FVPREATKKAESSRLQQAIQAKEVLNGEMEKSRRYGAPSSADLGLGKAGGKSVPHPYESRHVVVHPSPSDYSSRD
PSGVRASVMVLPSNTPAADLEVQQATHREASPSTLNDKSGHLHLGKPGHRSYALSPHTVIQTTHSASEPLPVGLP
ATAFYAGTQPPVIGYLSGQQQAITYAGSLPQHLVIPGTQPLLIPVGSTDMEASGAAPAIVTSSPQFAAVPHTFVT
TALPKSENFNPEALVTQAAYPAMVQAQIHLPVVQSVASPAAPPTLPPYFMKGSIIQLANGELKKVEDLKTEDFI
QSAEISNDLKIDSSTVERIEDSHSPGVAVIQFAVGEHRAQVSVEVLVEYPFFVFGQGWSSCCPERTSQLFDLPCS
KLSVGDVCISLTLKNLKNKSVKKGQPVDPASVLLKHSKADGLAGSRHRYAEQENGINQGSQAQMLSENGELKFPEK
MGLPAAPFLTKIEPSKPAATRKRWSAPESRKLEKSEDEPPLTLPKPSLIPQEVKICIEGRSNVGK

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FIGURE 291A

[illegible]

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FIGURE 291B

GCACAGCAGGAGCGGT CAGGGCTCCAGGCATCCCCGGGGAAGAAAGGAACGGGGCTTCACAGTGCCTGCCTTCTC
TAGCGGCACAGAAGCAGCCGGGGGCGCTGACTCCCGCTAGTGTCAGGAGAAAAGTCCCGTGGGAAGAGTCCCTGCA
GGGGTG CAGGGTTGCACGCATGTGGGGGTGCACAGGCGCTGTGGCGGCGAGTGAGGGTCTCTTTTCTCTGCCTC
CCTCTGCCTCACTCTCTTGCTATCGGCATGGGCCGGGGGGGTT CAGAGCAGTGTCTCTCTGGGGTTCCACGTGC
AAAATCAACATCAGGAACCCAGCTTCAGGGCATCGCGGAGACGCGTCAGATGGCAGATTTGGAAAGTTAACCATT
TAAAAGAACATTTTTCTCTCCAACATATTTTACAATAAAAGCAACTTTTAATTGTATAGATATATATTTCCCCCT
ATGGGGCCTGACTGCACTGATATATATTTTTTTTAAAGAGCAACTGCCACATGCGGGATTTTCAATTTCTGCTTTTT
ACTAGTGCAGCGATGTCACCAGGGTGTGTGGTGACAGGGAAGCCCCCTGCTGT CATGGCCCCACATGGGGTAAG
GGGGGTGGGGGTGGGGGAGAGGGAGAGAGCGAACACCCACGCTGGTTTCTGTGCAGTGT TAGGAAAACCAATCA
GGTTATTGCATTGACTTCACTCCCAAGAGGTAGATGCAAAGTCCCTTCAGTGAGAGCAACAGAAGCTCTTCACG
TTGAGTTTGCGAAATCTTTTTGTCTTTGAACTCTAGTACTGTTTATAGTT CATGACTATGGACAACCTCGGGTGCC
ACTTTTTTTTTTTTTCAGATTCCAGTGTGACATGAGGAATTAGATTTTGAAGATGAGCATATATTACTATCTTTAA
GCATTTAAAAATACTGTTCACTTTTATTACCAAGCATCTTGGTCTCTCATTCAACAAGTACTGTATCTCACTTT
AAACTCTTTGGGGAAAAAACAAAAACAAAAAACTAAGTTGCTTTCTTTTTTTCAACACTGTAACACTACATTTCA
GCTCTGCAGAAATTGCTGAAGAGCAAGATATTGAAAGTTTCAATGTGGTTTAAAGGGATGAATGTGAATTATGAAC
TAGTATGTGACAATAAATGACCACCAAGTACTACCTGACGGGAGGCACTTTTCACTTTGATGTCTGAGAATCAGT
TCAAGGCATATGCAGAGTTGGCAGAGAACTGAGAGAAAAGGGATGGAGAAGAGAATACTCATTTTTTGTCCAGTG
TTTTCTTTTTTAAGATGAACTTTTAAAGAACCTTGCGATTGACATATTGAGTTTATAACTTGTGTGATATTCC
TGCAGTTTTTATCCAATAACATTGTGGGAAAGGTTTGGGGGACTGAACGAGCATAAATAAATGTAGCAAAATTTT
TTTCTAACCTGCCTAAACTCTAGGCCATTTTATAAGGTTATGTTCTTTGAAAATTCATTTTGGTCTTTTTTACCA
CATCTGT CACAAAAGCCAGGTCTTAGCGGGCTCTTAGAAACTCTGAGAATTTTCTTCAGATTCATTGAGAGAGT
TTTCCATAAAGACATTTATATATGTGAGCAAGATTTTTTTTAAACAATTACTTTATTATTGTTGTTATTAATGTT
ATTTTCAGAAATGGCTTTTTTTTTTCTATTCAAAATCAAAATCGAGATTTAATGTTTGGTACAAACCCAGAAAGGGTA
TTTCATAGTTTTTAAACCTTTTCACTCCAGAGATCCGAAATATCATTTGTGGGTTTTGAATGCATCTTTAAAGTG
CTTTAAAAAAAAGTTTTATAAGTAGGGAGAAATTTTTAAATATCTTACTTGGATGGCTGCAACTAAACTGAACA
AATACCTGACTTTTTCTTTTACCCCATTTGAAAATAGTACTTTCTTCGTTT CACAAATTAATAAAAAAATCTGGTAT
CAACCCACATTTTGGCTGTCTAGTATTCACTTTACATTTAGGGTTCACCAGGACTAATGATTTTTATAAACCGTTT
TCTGGGGTGTACCAAAAACATTTGAATAGGTTTAGAATAGCTAGAATAGTTCCTTGACTTTCTCTGAATTTTCAAT
ACCCTCTCAGCATGCTTG CAGAGAGCTGGGTGGGCTCATCTTG CAGTCATACTGCTTATTTAGTGCTGTATTTT
TTAAACGTTTTCTGTT CAGAGAACTTGCTTAATCTTCCATATATTCTGCTCAGGGCACTTGCAATTATTAGGTTTT
GTTTTCTTTTTGTTTTTTTAGCCTTTGATGGTAAGAGGAATACGGGCTGCCACATAGACTTTGTTCTCATTAATA
TCATATTTACAAC TCATGTGGACTCAGAAAAACACACACCACCTTTTGGCTTACTTCGAGTATTGAATTGACTG
GATCCACTAAACCAACACTAAGATGGGAAAACACACATGGTTTGGAGCAATAGGAACATCATCATAATTTTTGTG
GTTCTATTT CAGGTATAGGAATTATAAAATAATTGGTTCTTTCTAAACACTTGTCCATTTCACTCTCTTGCTTT
TTTAGCATGTGCAATACTTTCTGTGCCAATAGAGTCTGACCAGTGTGCTATATAGTTAAAGCTCATTTCCCTTTTG
GCTTTTTCTTGTGTTTGATCTTCCCCATTCTGGCCAGAGCAGGGCTGGAGGGAAGGAGCCAGGAGGGAGAGA
GCCTCCACCTTTCCCTGCTGCGGATGCTGAGTGTGTTGGGGCGGGGAGCCTTCAGGAGCCCCGTGCGTCTGCCGC
CACGTTGCAGAAAGAGCCAGCCAAGGAGACCCGGGGGAGGAACCGCAGTGTCCCTGT CACCACACGGAATAGTG
AATGTGGAGTGTGGAGAGGAAGGAGGCAGATTCATTTCTAAGACGCACTCTGGAGCCATGTAGCCTGGAGTCAAC
CCATTTTCCACGGTCTTTCTGCAAGTGGGCAGGCCCTTCTCGGGGTCTGTGTCTTGAGACTTGAGGCCCTGC
CTCTGAGCCTGGACGGGAAGTGTGGCCTGTTGTGTGTGTGCGTTCTGAGCGTGTGTTGGCCAGTGGCTGTGGAGGGG
ACCACCTGCCACCCACGGTCACCACTCCCTTGTGGCAGCTTTCTCTTCAAATAGGAAGAACGCACAGAGGGCAGG
AGCCTCCTGTTTGCAGACGTTGGCGGGCCCCGAGGCTCCCAGAGCAGCCTCTGT CACCGCTTCTGTGTAGCAAAC
ATTAACGATGACAGGGGTAGAAATTCTTCGGTGCCGTTTCAGCTTACAAGGATCAGCCATGTGCCTCTGTACTATG
TCCACTTTGCAATATTTACCGACAGCCGTCTTTTGTCTTTCTTTCTTCTGTTTCCATTTTTAAACTAGTAACAGC
AGGCCTTTTCGTTTACAATGGAACACAATCACCAGAAATTAGTCAGGGCGAAAAGAAAAAATAATACTATTA
ATAAGAAACCAACAAACAAGAACCTCTCTTTCTAGGGATTTCTAAATATATAAAATGACTGTTCTTAGAATGTT
TAACCTAAGAATTATTT CAGTTTGTCTGGGCCACACTGGGGCAGAGGGGGAGGGAGGGATACAGAGATGGATGC

[illegible]

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FIGURE 292

MKSNQERSNECLPPKKREIPATSRSSSEKAPTLP SDNHRVEGTAWLPGNPGGRGHGGGRHGPAGTSVELGLQQGI
GLHKALSTGLDYSPPSAPRSVPVATTLPAAAYATPQPGTFVSPVQYAHLPHTFQFIGSSQYSGTYASFIPSQ LIPP
TANPVTSAVASAAGATTPSQRSQLEAYSTLLANMGSLSQTPGHKAEQQQQQQQQQQQQHQQQQQQQQQQQQQQ
QHLSRAPGLITPGSPPPAQQNQYVHISSSPQNTGRTASPPAIPVHLHPHQTMIPHTLTTLGPPSQVVMQYADSGSH
FVPREATKKAESSRLQQAIQAKEVLNGEMEKSRRYGAPSSADLGLGKAGGKSVPHPYESRHHVVVHPSPSDYSSRD
PSGVRASVMVLPNSNTPAADLEVQQATHREASPSTLNDKSGLHLGKPGHRSYALSPHTVIQTTHSASEPLPVGLP
ATAFYAGTQPPVIGYLSGQQQAITYAGSLPQHLVIPGTQPLLIPVGSTDMEASGAAPAIVTSSPQFAAVPHTFVT
TALPKSENFNPEALVTQAAYPAMVQAQIHLPVVQSVASPAAPPTLPPYFMKGSIIQLANGELKKVEDLKTEDFI
QSAEISNDLKIDSSTVERIEDSHSPGVAVIQFAVGEHRAQVSVEVLVEYPFFVFGQGWSGCCPERTSQLFDLPCS
KLSVGDVCISLTLKNLKNQSVKKGQPVDPASVLLKHSKADGLAGSRHRYAEQENGINQGSQAQMLSENGELKFPEK
MGLPAAPFLTKIEPSKPAATRKRWSAPESRKLEKSEDEPPLTLPKPSLIPQEVKICIEGRSNVGK

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FIGURE 293

GGCGAATGGAGCAGGGGCGCGCAGATAATTAAAGATTTACACACAGCTGGAAGAAATCATAGAGAAGCCGGGCGT
GGTGGCTCATGCCTATAATCCCAGCACTTTTGGAGGCTGAGGCGGGCAGATCACTTGAGATCAGGAGTTCGAGAC
CAGCCTGGTGCCTTGGCATCTCCCAATGGGGTGGCTTTGCTCTGGGCTCCTGTTCCCTGTGAGCTGCCTGGTCCCT
GCTGCAGGTGGCAAGCTCTGGGAACATGAAGGTCTTGCAGGAGCCACCTGCGTCTCCGACTACATGAGCATCTC
TACTTGCAGTGGAAAGATGAATGGTCCCACCAATTGCAGCACCAGCTCCGCTGTTGTACCAGCTGGTTTTTCT
GCTCTCCGAAGCCCACACGTGTATCCCTGAGAACACGGAGGCGCGGGGTGCGTGTGCCACCTGCTCATGGATGA
CGTGGTCAGTGCGGATAACTATACACTGGACCTGTGGGCTGGGCAGCAGCTGCTGTGGAAGGGCTCCTTCAAGCC
CAGCGAGCATGTGAAACCCAGGGCCCCAGGAAACCTGACAGTTCACACCAATGTCTCCGACACTCTGCTGTGAC
CTGGAGCAACCCGTATCCCCCTGACAATTACCTGTATAATCATCTCACCTATGCAGTCAACATTTGGAGTGAAAA
CGACCCGGCAGATTTTCAAGATCTATAACGTGACCTACCTAGAACCCCTCCCTCCGCATCGCAGCCAGCACCCTGAA
GTCITGGGATTTTCTACAGGGCACGGGTGAGGGCTGGGCTCAGTGCTATAACACCACCTGGAGTGAGTGGAGCCC
CAGACCAAGTGGCACAACTCCTACAGGGAGCCCTTCGAGCAGCACCTCCTGCTGGGCGTCAGCGTTTCTGTCAT
TGTATCCTGGCCGTCTGCCTGTTGTGCTATGTGAGCATCACCAAGATTAAGAAAGAATGGTGGGATCAGATTCC
CAACCCAGCCCGCAGCCGCTCGTGGCTATAATAATCCAGGATGCTCAGGGGTACAGTGGGAGAAGCGGTCCCG
AGGCCAGGAACAGCCAAGTGGCCACACTGGAAGAATTGTCTTACCAAGCTCTTGGCCTGTTTTCTGGAGCACAA
CATGAAAAGGGATGAAGATCCTCACAAGGCTGCCAAAGAGATGCCTTTCCAGGGCTCTGGAAAATCAGCATGGTG
CCCAGTGGAGATCAGCAAGACAGTCTCTGGCCAGAGAGCATCAGCGTGGTGCATGTGTGGAGTTGTTTGAGGC
CCCGGTGGAGTGTGAGGAGGAGGAGGAGGTAGAGGAAGAAAAGGGAGCTTCTGTGCATCGCCTGAGAGCAGCAG
GGATGACTTCCAGGAGGGAAGGGAGGGCATTGTGGCCCGGCTAACAGAGAGCCTGTTCTGGACCTGCTCGGAGA
GGAGAATGGGGGCTTTTGCCAGCAGGACATGGGGGAGTCATGCCTTCTTCCACCTTCGGGAAGTACGAGTGCTCA
CATGCCCTGGGATGAGTTCCCAAGTGCAGGGCCCCAAGGAGGCACCTCCCTGGGGCAAGGAGCAGCCTCTCCACCT
GGAGCCAAGTCTCTGCCAGCCCGACCCAGAGTCCAGACAACCTGACTTGACAGAGACGCCCCCTCGTCATCGC
AGGCAACCTGCTTACCGCAGCTTCAGCAACTCCCTGAGCCAGTCACCGTGTCCAGAGAGCTGGGTCCAGACCC
ACTGCTGGCCAGACACCTGGAGGAAGTAGAACCCGAGATGCCCTGTGTCCCCAGCTCTCTGAGCCAACCACTGT
GCCCCAACCTGAGCCAGAAACCTGGGAGCAGATCCTCCGCCGAAATGTCTCCAGCATGGGGCAGCTGCAGCCCC
CGTCTCGGCCCCACCAGTGGCTATCAGGAGTTTGTACATGCGGTGGAGCAGGGTGGCACCCAGGCCAGTGCGGT
GGTGGGCTTGGGTCCCCAGGAGAGGCTGGTTACAAGGCCCTTCTCAAGCCTGCTTGCCAGCAGTGCTGTGTCCCC
AGAGAAATGTGGGTTTGGGGCTAGCAGTGGGGAAGAGGGGTATAAGCCTTTCCAAGACCTCATTCTGGCTGCCC
TGGGGACCTGCCCCAGTCCCTGTCCCTTGTTCACCTTTGGACTGGACAGGGAGCCACCTCGCAGTCCGCAGAG
CTCACATCTCCCAAGCAGCTCCCCAGAGCACCTGGGTCTGGAGCCGGGGGAAAAGGTAGAGGACATGCCAAAGCC
CCCACTTCCCCAGGAGCAGGCCACAGACCCCTTGTGGACAGCCTGGGCAGTGGCATTGTCTACTCAGCCCTTAC
CTGCCACCTGTGCGGCCACCTGAAACAGTGTGATGGCCAGGAGGATGGTGGCCAGACCCCTGTGATGGCCAGTCC
TTGCTGTGGCTGCTGCTGTGGAGACAGGTCTCGCCCCCTACAACCCCTGAGGGCCCCAGACCCCTCTCCAGG
TGGGGTTCCACTGGAGGCCAGTCTGTGTCCGGCCTCCCTGGCACCTCGGGCATCTCAGAGAAGAGTAAATCCTC
ATCATCCTTCCATCCTGCCCCCTGGCAATGCTCAGAGCTCAAGCCAGACCCCCAAAATCGTGAACCTTTGTCTCCGT
GGGACCCACATACATGAGGGTCTCTTAGGTGATGTCTCTTGTGTGCTGAGTCTGCAGATGAGGACTAGGGCTTA
TCCATGCCTGGGAAATGCCACCTCCTGGAAGGCAGCCAGGCTGGCAGATTTCCAAAAGACTTGAAGAACCATGGT
ATGAAGTGATTTGGCCCCACTGACGTTGGCCTAACACTGGGCTGCAGAGACTGGACCCCGCCAGCATTGGGCTG
GGCTCGCCACATCCCATGAGAGTAGAGGGCACTGGGTGCGCGTGCCCCACGGCAGGCCCTGCAGGAAAACCTGAG
GCCCTGGGGACCTCGACTTGTGAACGAGTTGTTGGCTGCTCCCTCCACAGCTTCTGCAGCAGACTGTCCCTGTT
GTAAGCCGAGCCTAGAACTAACACAGCCATCAAGGGAATGACTTGGGCGGCCCTTGGGAAATCGATGAGAAATT
GAACCTCAGGGAGGGTGGTCATTGCTTAGAGGTGCTCATTCATTTAACAGAGCTTCCTTAGGTTGATGCTGGAGG
CAGAATCCCGGCTGTCAAGGGGTGTTTCAAGGAGGACATGAAAAATTGCTATGACTAAAGCA
GGGACAATTTGCTGCCAAACACCCATGCCAGCTGTATGGCTGGGGGCTCCTCGTATGCATGGAACCCCCAGAAT
AAATATGCTCAGCCACCTGTGGGCGGGGAATCCAGACAGCAGGCATAAGGCACCAGTTACCCTGCATGTTGGC
CCAGACCTCAGGTGCTAGGGGAAGGCGGGAACTTGGGTTGAGTAATGCTCGTCTGTGTGTTTTAGTTTCATCACC
TGTTATCTGTGTTTGGCTGAGGAGAGTGGAACAGAAGGGGTGGAGTTTTGTATAAATAAAGTTTCTTTGTCTC

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FIGURE 294

MGWLCSGLLFPVSCLVLLQVASSGNMKVLQEPTCVSDYMSISTCEWKMNPTNCSTELRLLYQLVFLLEAHTCI
PENNGGAGCVCHLLMDDVVSADNYTLDLWAGQQLWKGSFKPSEHVKPRAPGNLTVHTNVSDTLLLTWSNPYPPD
NYLYNHLTYAVNIWSENDPAFRIYNVTYLEPSLRIAASTLKSGISYRARVRAWAQCYNNTWSEWSPSTKWHNSY
REPFEQHLLLGVSVSCIVILAVCLLCYVSITKIKKEWWDQIPNPARSRLVAIIQDAQGSQWEKRSRGQEPKCP
HWKNCLTKLLPCFLEHNMKRDEDPHKAAKEMPFQGSKSACWCPVEISKTVLWPESISVVRVCLFEAPVECEEEEE
EVEEEKGSFCASPESSRDDFQEGREGIVARLTESLFLDLGEEGGFCQQDMGESCLLPSPSGSTSAHMPWDEFPS
AGPKEAPPWGKEQPLHLEPSPASPTQSPDNLTCTETPLVIAGNPAYRSFSNSLSQSPCPRELGPDP LLARHLEE
VEPEMPCVPQLSEPTTVPQPEPETWEQILRRNVLQHGAAPVSAPTSGYQEFVHAVEQGGTQASAVVGLGPPGE
AGYKAFSSLLASSAVSPEKCGFGASSGEEGYKPFQDLIPGCPGDPAPVPVPLFTFGLDREPPRSPQSSHLPSSSP
EHLGLEPGEKVEDMPKPLPQEQATDPLVDSLGSIVYSALTCHLCGHLKQCHGQEDGGQTPVMASPCCGCCCGD
RSSPPTTPLRAPDPSPGGVPLEASLCPASLAPSGISEKSKSSSSFHPAPGNAQSSSQTPKIVNFVSVGPTYMRVS

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FIGURE 295

ATTGAGTGCTCCGGAGAACAGACCCGCGCCCCGCCGTCCGCGAGCCTCCCGAGAGCCGTCCCTTCGTCCGGCCC
TGGAGCATTGCGTTTGTGCGCCGGTGTGCGAGTGCAGGATGGCGCCGCGGGTGTAGCGGCTCTCTGCGCAGGCCG
AGTGGGCCCAGAGAAGCGAGGAACTCCCCAGATCGCCGACACGTCTCGTCTCCTGTCCCAATTCAGGGCTTGGTG
AGGTGACTCGCGGTGCGGGGTGACTCGCCGGCAGGACACTGCCTGGAACGCCTGGAGCGCCTCCCACTGCAGACG
TCTGTCCGCCTCCAGCCGCTCTCCTCTGACGGGTCTGCCTCAGTTGGCGGAATGGCGGCCACGGGAGCCAATGC
AGAGAAAGCTGAAAGTCACAATGATTGCCCCGTGAGACTTTTAAATCCAAACATAGCAAAAATGAAAGAAGATAT
TCTCTATCATTTCATCTCACCCTAGCAGACACAATTTCCCAGCCTTGTTTGGAGATGTGAAGTTTGTGTGTGT
TGGTGGAAGCCCCCTCCCGGATGAAAGCCTTCATCAGGTGCGTTGGTGCAGAGCTGGGCCTTGACTGCCCAGGTAG
AGACTATCCCAACATCTGTGCGGGAAGTGACCGCTATGCCATGTATAAAGTAGGACCGGTGCTGTCTGTCTAGTCA
TGGTATGGGCATTCCCTTCTATCTCAATCATGTTGCATGAGCTCATAAAGCTGCTGTACTATGCCCGGTGCTCCAA
CGTCACTATCATCCGCATTGGCACTTCTGGTGGGATAGGTCTGGAGCCCGGCACTGTGGTGCATAACAGAGCAGGC
AGTGGATACCTGCTTCAAGGCAGAGTTTGAGCAGATTGTCTGGGGAAGCGGGTCATCCGGAAAACGGACCTTAA
CAAGAAGCTGGTGCAGGAGCTGTTGCTGTGTTCTGCAGAGCTGAGCGAGTTCACCACAGTGGTGGGGAACACCAT
GTGCACCTTGGACTTCTATGAAGGGCAAGGCCGTCTGGATGGGGCTCTCTGCTCCTACACGGAGAAGGACAAGCA
GGCGTATCTGGAGGCAGCCTATGCAGCCGGCGTCCGCAATATCGAGATGGAGTCCCTCGGTGTTTGCCGCCATGTG
CAGCGCCTGCGGCCTCCAAGCGGCCGTGGTGTGTGTACCCCTCCTGAACCGCCTGGAAGGGGACCAGATCAGCAG
CCCTCGCAATGTGCTCAGCGAGTACCAGCAGAGGCCGAGCGGCTGGTGAGCTACTTCATCAAGAAGAACTGAG
CAAGGCCTGAGCGCTGCCCTGCACCTCCGCAGACCTGCTGTGATGACTTGCCATTAAAAGCATTGTCCAAACCC

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FIGURE 296

MAATGANA EKAESHND CPVRLNPNIAKMKEDILYHFNLTTSRHNFPALFGDVKFVCVGGSPSRMKAFIRCVGAE
LGLDCPGRDYPNICAGTD RYAMYKVGPVLSVSHGMGIPSI SIMLHELIKLLYYARCSNVTIIRIGTSGGIGLEPG
TVVITEQAVDTCFKA EFEQIVLGKRVIRKTDLNKKLVQELLCSAELSEFTTVVGNTMCTLDFYEGQGRLDGALC
SYTEKDKQAYLEAAYAAGVRNIEMESSVFAAMCSACGLQAAVVCVTLLNRLEGDQISSPRNVLSEYQQRPQRLVS
YFIKKKLSKA

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FIGURE 297

GGCACGAGGGCGCGCAAGGCACCGGTGGCAGCGGCGACGGCAGCTGCGACAGCAACCCCTGCTGGGCCGAACTG
GGCAGAGCGGAGCAGACGTCTGAAGCAGCGCGAGTGAGGCGCGAGGGTAGCGCCCGCGCCCGGGAAGACCCCTCG
GCGCGAACC GG CAGCC CAGCCCGGGTCCCGGTTCCCAAGGCCCCGCCTCTAGGGCCTGGGGACTAATCGGATTG
AGAGCGCGCCGGCCCGGGCCGCGAACTCGCCAATTGCGGAGGGCGGTGGCCACCGCCCAATCCGGAGCAGACAGG
TGCGAGGTCCGGAAGGCGGAGGCCAATCGGCGGCGGTTGCGACCTGCTGGGGCAGGTCTCGGCCAATAAGGAGGC
TCGAGTGACATCTTCGCGCACCAATCGGGAGTGAGGGAGCATTTCGTGCCCCGCTCGCCCTTCGGGCCAGACCTCTA
TTTACCAGGGGCGTG CAGCCCGCTTGCCAATCAGAGCGCGGCTGAGCGGCCCCGCAGCCAACCCCGAGGAGCGG
CCGGCTGGCGTCCGCCGCGCC CAGGAGTTGGGGATGTCCTACAAACCCATCGCCCCCTGCTCCCAGCAGCACCCCT
GGCTCCAGCACCCCTGGGCCCGGCACCCCGGTCCCTACAGGAAGCGTCCCGTCGCCGTCGGGCTCAGTGCCAGGA
GCCGGCGCTCCTTTTCAGACCGCTGTTTAACGACTTTGGACCGCCTTCCATGGGCTACGTGCAGGCGATGAAGCCA
CCCGGCGCCCAGGGCTCCCAGAGCACCTACACGGACCTGCTGTCTAGTCATAGAGGAGATGGGCAAAGAGATCCGG
CCTACCTATGCTGGCAGCAAGAGCGCCATGGAGCGCCTGAAGAGAGGTATCATCCATGCCCCGGGCCCTAGTCAGA
GAGTGCCCTGGCAGAGACAGAGCGGAACGCCCGCACGTAAACAGGAAGCGCCTCGGCCTCAGCGTCTGGACCTATCC
GGCCACTGCAGAGCACCCGCTTCTCCCTGGCCTTCATCCCGAGTTGCACTAACCATCCTGGGCTTCCTGTCCTGT
GTCCCTTGGTGGGTCCCCCTCAGGAACCAAGGAGTGGCCCTCCAGGTGGCAGCACTAAGGACACCCCCCACAAC
AAGAGTTAGCAGCGAGGTCCCCATGAGTCCCACCCATGACCTGCCGACAGTGTTGCCACCGGAAC TTTTGTGGC
CCCTACCGCTCAGCCCTTCCCAGCACTTCTCCCACTTTGTCCCAGCCTCCTTCTCCCCCAGCAGGGGCACAGGC
CTGGCACCTCCCTGCCTTGTGTCCTGAGCCATAGTGACTCTTTTATCTGTGTGTCTTTTGCTAAATATGCCCTTT
TTATATTAATAAAAGATGATTTGGAGTTGTGCTCTCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 298

MSYKPIAPAPSSTPGSSTPGPGTPVPTGSVPSPSGSVPGAGAPFRPLFNDFGPPSMGYVQAMKPPGAQGSQSTYT
DLLSVIEEMGKEIRPTYAGSKSAMERLKRGIIHARALVRECLAETERNART

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FIGURE 299

ATGGCGACTGCGACCCCGTGCCGCCGCGGATGGGCAGCCGCGCTGGCGGCCCCACCACGCCGCTGAGCCCCACG
CGCCTGTCGCGGCTCCAGGAGAAGGAGGAGCTGCGCGAGCTCAATGACCGGCTGGCGGTGTACATCGACAAGGTG
CGCAGCCTGGAGACGGAGAACAGCGCGCTGCAGCTGCAGGTGACGGAGCGCGAGGAGGTGCGCGGCCGTGAGCTC
ACCGGCCTCAAGGCGCTCTACGAGACCGAGCTGGCCGACGCGCGACGCGCTCGACGACACGGCCCGCGAGCGC
GCCAAGCTGCAGATCGAGCTGGGCAAGTGCAAGGCGGAACACGACCAGCTGCTCCTCAACTATGCTAAGAAGGAA
TCTGATCTTAATGGCGCCAGATCAAGCTTCGAGAATATGAAGCAGCACTGAATTCGAAAGATGCAGCTCTTGCT
ACTGCACTTGGTGACAAAAAAGTTTAGAGGGAGATTTGGAGGATCTGAAGGATCAGATTGCCCAGTTGGAAGCC
TCCTTAGCTGCAGCCAAAAACAGTTAGCAGATGAACTTTACTTAAAGTAGATTTGGAGAATCGTTGTCAGAGC
CTTACTGAGGACTTGGAGTTTCGCAAAAGCATGTATGAAGAGGAGATTAACGAGACCAGAAGGAAGCATGAAACG
CGCTTGGTAGAGGTGATTCTGGGCGTCAAATTGAGTATGAGTACAAGCTGGCGCAAGCCCTTCATGAGATGAGA
GAGCAACATGATGCCCAAGTGAGGCTGTATAAGGAGGAGCTGGAGCAGACTTACCATGCCAACTTGAGAATGCC
AGACTGTCATCAGAGATGAATACTTCTACTGTCAACAGTGCCAGGGAAGAACTGATGGAAAGCCGCATGAGAATT
GAGAGCCTTTCATCCAGCTTTCTAATCTACAGAAAGAGTCTAGAGCATGTTTGGAAAGGATTCAAGAATTAGAG
GACTTGCTTGCTAAAGAAAAAGACAACCTCTCGTCGCATGCTGACAGACAAAGAGAGAGAGATGGCGGAAATAAGG
GATCAAATGCAGCAACAGCTGAATGACTATGAACAGCTTCTTGATGTAAAGTTAGCCCTGGACATGGAAATCAGT
GCTTACAGGAACTCTTAGAAGGCGAAGAAGAGAGGTTGAAGCTGTCTCCAAGCCCTTCTTCCCGTGTGACAGTA
TCCCGAGCATCCTCAAGTCGTAGTGACGTACAACCTAGAGGAAAGCGGAAGAGGGTTGATGTGGAAGAATCAGAG
GCGAGTAGTAGTGTTAGCATCTCTATTCCGCCCTCAGCCACTGGAAATGTTTGCATCGAAGAAATTGATGTTGAT
GGGAAATTTATCCGCTTGAAGAACACTTCTGAACAGGATCAACCAATGGGAGGCTGGGAGATGATCAGAAAAATT
GGAGACACATCAGTCAGTTATAAATATACCTCAAGATATGTGCTGAAGGCAGGCCAGACTGTTACAATTTGGGCT
GCAAACGCTGGTGTACAGCCAGCCCCCAACTGACCTCATCTGGAAGAACCAGAAGCTCGTGGGGCACTGGCGAA
GATGTGAAGGTTATATTGAAAAATTCTCAGGGAGAGGAGGTTGCTCAAAGAAGTACAGTCTTTAAAACAACCATA
CCTGAAGAAGAGGAGGAGGAGGAAGAAGCAGCTGGAGTGGTTGTTGAGGAAGAAGCTTTCCACCAGCAGGGAACC
CCAAGAGCATCCAATAGAAGCTGTGCAATTATG**TAA**AATTTTCAACTGTCTTCCTCAAATAAAGAAGTATGGTA
ATCTTTACCTGTATACAGTGCAGAGCCTTCTCAGAAGCACAGAATATTTTTATATTTCTTTATGTGAATTTTTA
AGCTGCAAATCTGATGGCCTTAATTTCTTTTGGACACTGAAAGTTTGTAAAAGAAATCATGTCCATACACTTT
GTTGCAAGATGTGAATTATTGACACTGAACTTAATAACTGTGTACTGTTTCGGAAGGGGTTCCTCAAATTTTTGA
CTTTTTTTGTATGTGTGTTTTTTCTTTTTTTTAAGTTCTTATGAGGAGGGGAGGGTAAATAAACCCTGTGCGT
CTTGGTGTAATTTGAAGATTGCCCCATCTAGACTAGCAATCTCTTCATTATTCTCTGCTATATATAAAACGGTGC
TGTGAGGGAGGGGAAAAGCATTTTTCAATATATTGAACTTTGTACTGAATTTTTTTGTAATAAGCAATCAAGGT
TATAATTTTTTTTTAAATAGAAATTTTGAAGAAGGCAATATTAACCTAATCACCATGTAAGCACTCTGGATGAT
GGATTCCACAAAACCTTGGTTTTATGGTTACTTCTTCTCTTAGATTCTTAATTCATGAGGAGGGTGGGGGAGGGAG
GTGGAGGGAGGGGAAGGGTTTCTCTATTAATAATGCATTCTGTTGTGTTTTTTAAGATAGTGTAAGTTGCTTAAATTT
CTTATGTGACATTAACAAATAAAAAAGCTCTTTT

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FIGURE 300

MATATPVPPRMGSRAGGPTTPLSPTRL SRLQEKEELRELNDRLAVYIDKVR SLETENSALQLQVTEREEVRGREL
TGLKALYETELADARRALDDTARERAKLQIELGKCKAEHDQLLLNYAKKESDLNGAQIKLREYEAALNSKDAALA
TALGDKKSLEGDLEDLKDQIAQLEASLAAAKQLADETLLKVDLENRCQSLTEDLEFRKSMYEEEINETRRKHET
RLVEVD SGRQIEY EYKLAQALHEMREQHDAQVRLYKEELEQTYHAKLENARLSSEMNTSTVNSAREELMESRMRI
ESLSSQLSNLQKESRACLERIQELEDLLAKEKD NSRRMLTDKEREMAEIRDQMQQQLNDYEQLLDVKLALDMEIS
AYRKLEGE EERLKLSPSPSSRVTVSRASSRSVRTTRGKRKRVDVEESEASSSVSISHSASATGNVCIEEIDVD
GKFIRLKNTSEQDQPMGGWEMIRKIGDTSVSYKYTSRYVLKAGQTVTIWAANAGVTASPP TDLIWKNQNSWGTGE
DVKVILKNSQGEEVAQRSTVFKTTIPEEEEEEEEAAGVVVEELFHQQGTPRASNRSCAIM

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FIGURE 301A

ATCAAATGTGGGGTTTGTACATTCCGCTGCCGCCGCGGACAGTTCTTAAAGGGCCAGCCGCCGGCTGCCGCGCA
GACCCAGCTGCGTCCTGCGCCGCTCCCGCTCCCTGAGGGCCTGGGCCGAGAGAGACTGATCGCGCGTGGGCCTC
GCGAGGCAGACGCCGTGCGGCGGACAACAAAGAGAGAGGCCCGGAAGGAGCCGGGCTGCCCCCGGACCCGGGGG
TGGGGAGGGGAGCACATTGTTCCGAGGGCGGGAGCTCTTAAAGGATCCAGACAGGCACCCCCCCCCCTCCCCCGC
CCCCTGCCAGTTTGGCCGTCTAGATCGGGAACAAAGGAGTCAACGTGTGGCCGGGCGGCCAAAGGGTTGTGAG
TCCCGGCCAGCCCCCTCCACCCCCCTGCCCCCGGATCGCAGCATGGGCTCTGGCAGTGACTAGGTGGCCACCCT
CCGCCCCCGTGGGCCAGCGGCGATTCTCTGCGGGACCTGGCAGCACCCCGGGCCAGCTCTGGGGAAGCCCTGGCC
TCGAGGGCCCCCTGGCCAGCCCGCCTGCCCCGGGATGAGCGCTTACCCTCCAGCAGCCGCGCTCCCGACCTCCAC
ACCTCCCCGTAGAGGAGCGCCGAGCCTCGGCTCCTGCCGGCGGGAGCCCCGAATGCTGCACCCAGCCACCAGC
AGAGCCCGTTTCATGGTTGATCTCCACGAGCAGGTGCACCAGGGACCTGTCCCTCTGTCTACACGGTCACCACAG
TGACGACCCAAGGCTTCCCTTGCCTACAGGCCAGCACATCCCTGGCTGCAGTGCCAGCAGCTCCCAGCATGCT
CCTGTGATGTTTCAGTGGGCAGCATTACCCCTCTGTGCTCCCGCCCCGCTTATCCAGGCGTGCACCATGCAGC
AGCTGCCTGTGCCCTATCAGGCCTACCCCCACCTCATCTCCAGTGACCACTACATCCTGCACCCCCACCACCGG
CCCCACCCCCCAGCCACCCACATGGCGCCCTGGGGCAGTTTGTGTCTCTGCAGACCCAGCACCCCTCGGATGC
CCCTCCAGCGGCTCGACAACGACGTGGACCTGCGTGGGGACAGCCCTCCCTGGGCAGCTTCACTACTCCACCT
CTGCGCCTGGCCAGCCCTTTCCCGTGGTGCCCTGCACTACCTGCCCCACGATCCGCTGCACCAGGAGCTGT
CCTTTGGTGTGCCATATTCTACATGATGCCACGGAGACTGAGCACCCAGAGATACCGCTGCAGCAGCCACTGC
CCCGCGCGCCCCACCCCCACCCCACTACTACCCAGCTTCCCTGCCCTACTTCTCTCGATGCTGCCAA
TGTCACCAACAGCAATGGGGCCACCATCAGCCTGGACCTGGACGTGGATGATGTGGAGATGGAGAACTATGAGG
CCCTCCTGAACCTGGCCGAGCGGCTGGGAGATGCCAAGCCCCGGGGTCTACCAAAGCAGACATAGAGCAGCTCC
CGTCGTACCGCTTTAACCCGGACAGCCATCAGTCGGAGCAGACGCTGTGTGTGGTCTGCTTCAGTGACTTCGAGG
CGCGGCAGCTGCTCCGAGTCCCTCCCTGCAACCATGAGTTCCACACCAAGTGTGTTGACAAGTGGTTGAAGGCCA
ACCGGACGTGTCCCATCTGCCGGGCGGACGCTCCGAGGTGCCAGGGAGGCTGAGTGAGGCCACGCAGCCGCT
GCCCGGGAGAACCCTGCCTGAAGCTCTGGAAACTTGTGGGTGGGGCCAGGGAGGATGGGGAGGGAGTGGCCAG
GCCTGCCCTTCGCTCCTGCCTGCATTTCCAGAGCTGGTGCCAGGGTCAGCCAGCGAGGAGTCCCTGCAATAAG
CCCCTGCAATTGCAAGCTCCAAAGACTCCCTCCCTAGTCTGCCTGCCCGCCCGCCGACCGAGCTGCCTGAG
TGTCCTGATCGGGTCTCCCTCCTGTGCACCCCTCAGGTCCCTCCTTTTCTGCTGGCACTGAGTGCCAGGGTCC
GCTCCCTCAGTGGGGCCGGTGGAGATCCTTGGCCCCAGGATGGGCAGACAGAGCACCATCCTGGGTGAGAAGGTC
TCATGCTCTGAAATGGCGTGCCCTCTGCCCAGGTGGCACTGCCAGGTGCGTAGACAGACGGTGTACGAGCCATT
TCCTGAGCCCCAGGGCTGAATCCCCCTCCTTGACCCCGAACAGTGAACCTCAGGCAGCTGGCTCTGTGTTGGCTG
CTGTGAGGGCTGAGTCTGGTTCCCTAGGGGACCCCTCATCCAGGAACAACATTCCAGCCCCACCCCTCAGGCTGGA
GGGCGTCCAGCCTAATCCCGAGCTGGGGCACACGTATCTGAGGGGCTTGGGCCATACGGGGAGAGGGAGCCCT
GTGTTCCCGGTGGTTGTCCCTCCAGGGATGCAGCCAGACCCGTGCCAATCTCCTCTCCCTCTGTTGTTTTGCA
TGAACGTGAGGAGCAGCAGTTTTTGTTCATTCAATTGGCCAAAATCACGTGTAGGATTTGGGGATGTGGATATT
TAAGACAATTTCTTTTTCTTTTGGTTTAATAGGGGCGGGTATAGGGACCAACTGGGACCGAGTGCCAGGGGGC
CGAGCACGGTCATGCTGGCCGGCCTGCATGCATGCGTGTGCCGGGCTGGGCTGGGCGGCCGGCGGTGCTGGGGCA
GGGTTGGGGTCTGTGCTCAGCTGATAACTGCCATGCACTGTACTGCACACGTCCCTAGAGCCTACCGGGACCCG
ACGCTTTTCAGGGCATTCTCCCTCCAGCCAGGGCCCAACTCCACCTGCCTGGGCGAATCTCCTCCAAGGAAGT
CCCAGGAGGATGGGGACCAGGAAGGCTGTGGACCCCCATCTCCAGGGGCTTCCAGCCTGATCCCTGTCTCTCC
AAGTTCTGGAGGAGCCGCTGTAGGGTCTGGCTGAGCTTCCACCCACTTCCCTGGTCCCAATCCTTTCTTGTCT
CTATACCCAGCTGGGGTTGCTGCCCTGAACGAAGTGCCTGTGGGGCCGGCACATCCTAGCAGGCAGCCCCCTGGCG
CCTGCTGCCCTCAGGGATGCTCCAACACCCCTCGTTCTCCTCGCAGTGGCCCTGGCTCCACCTCCCGCCCCAGCC
TGCCGTGGGGCCCGTCAGCCTGGTCCACCCCCATGGAGAACCCAAAGTCTTACTGTATATAACTCCAGGTGACG
TTTCTATATTTATAGCAGTGTGAAAACCCACGTGTTTTACACAGAACCACCCTCTCCAACCCCTCCCTTCCCGA
CCCCAACAAAACGTTTTCAAACCCCTTACAGTTCCCTGGGGCAGGCGGAAACAGGCTCACAGATTGTGTGTCGGCT
GCAGCAGTGATTCCAACAAGCAGCTATTGGGGGGGAAACACAGCATTTAAAAGATCATCATTAAAAACAAGAT
TTATACAACAATTACTTAGGATGTTTGTGATCCGCCGACCTTGCTATAGATGCCATGTTACCAATGATTTCTGT
GGTGGGGGCTTGCCATTGTTTACTCTCTTATTTACCAACTTCTGGCCTAGGCATGACAGTGGGCACCTTCCCCCA

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FIGURE 301B

GCCCTGGCTGGGCCCAGCGCCTGTGTTCTGTGTTAGAAAGGTTTTATATATATATAAAAATTACATATATATGTAG
AAATATATGTAATTTTGGGGGCCCTGTTCCCTGCACATTTTACAGTTACCTCATTTTTCCCATGTATGTATTTGA
GAAAATGCTAATATATAGAGAAAAAATGGTTCTTAAAGCTTAAATGTGTGGTTTTTTCCATTCCATGGGATTCA
CATTGGTTTGTAGCATTTAACATAACTAGTATGTTGTATTATATATATGTGTATACTGATTGAAATTTTTAACAG
ATTTGTACTTTTTTTAAAATGAAAGTTGCTAGTTCTGCTTGACCAAGTAGTGCAATCATTATTTTTTTAATATT
GTTGCTGATTTTCAAGAGGATATTCACATAATAAATGTATGATGTATACC

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FIGURE 302

MRPWALAVTRWPPSAPVGQRRFSAGPGSTPGQLWGSPGLEGLASPPARDERLPSQOPP SRPPHLPVEERRASAP
AGGSPRMLHPATQQSPFMVDLHEQVHQGPVPLSYTVTTVTQGFPLPTGQHIPGCSAQQLPACSVMFSGQHYPLC
CLPPPLIQACTMQQLPVFYQAYPHLISSDHYILHPPPPAPPPQPTHMAPLGQFVSLQTQHPRMPLQRLDNDVDLR
GDQPSLGSFTYSTSAPGPALSPSVPLHYLPHDPLHQELSFQVPYSHMMPRRLSTQRYRLQQPLPPPPPPPPPPY
YPSFLPYFLSMLPMSPTAMGPTISLDLDVDDVEMENYEALLNLAERLGDAKPRGLTKADIEQLPSYRFNPD SHQS
EQTLCVVCFSDFEARQLLRVLPCNHEFHTKCVDKWLKANRTCPICRADASEVPREAE

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FIGURE 303

CGCACCATAACCGGCGCGGGCACCTGGGGAGAAATGGATGGAGAAGGGACCTGGCTGGAAAGCTTTGCCCCGCTGC
TCTGCTCCGCCCATAAGAGGACCCCTGAAATGTCCCGTGCAGTTTGTTCAGTCCCCTGTGTGATGAAATGTGCC
TCTCGCCTTACCCGTGTGAGAATACCTGTGGTGTGGCAGCGAGTATTTTGGTATTTGACCTGTCCAAAGACGACT
TGATACCTCTATAATGTAACAGAAAAGGTCAGAAAATATTAAGCAAGTAGAAGTGTGGAGCATATTAAGCAAGAT
GAACATCTCGGGAAGCAGCTGTGGAAGCCCTAACTCTGCAGATACATCTAGTGACTTTAAGGACCTTTGGACAAA
ACTAAAAGAAATGTCATGATAGAGAAGTACAAGGTTTACAAGTAAAAGTAACCAAGCTAAAACAGGAACGAATCTT
AGATGCACAAAGACTAGAAGAATTCTTCACCAAAAATCAACAGCTGAGGGGAACAGCAGAAAAGTCCTTCATGAAAC
CATTAAAGTTTGTAGAAGATCGGTTAAGAGCAGGCTTATGTGATCGCTGTGCAGTAACTGAAGAACATATGCGGAA
AAAACAGCAAGAGTTTGAAGATATCCGGCAGCAGAACTCTTAAACTTATTACAGAACTTATGAATGAAAGGAATAC
TCTACAGGAAGAAAATAAAAAGCTTTCTGAACAACTCCAGCAGAAAATTGAGAATGATCAACAGCATCAAGCAGC
TGAGCTTGAATGTGAGGAAGACGTTATTCCAGATTACCCGATAACAGCCTTCTCATTTTCTGGCGTTAACCGGCT
ACGAAGAAAGGAGAACCCCATGTCCGATACATAGAACAAACACATACTAAATTTGGAGCACTCTGTGTGTGCAAA
TGAAATGAGAAAAGTTTCCAAGTCTTCAACTCATCCACAACATAATCCTAATGAAAATGAAATTCTAGTAGCTGA
CACTTATGACCAAAGTCAATCTCCAATGGCCAAAGCACATGGAACAAGCAGCTATACCCCTGATAAGTCATCTTT
TAATTTAGCTACAGTTGTTGCTGAAACACTTTGGACTTTGGTGTTCAGAAGAATCTGAACTCAAGGTCCCATGAG
CCCCCTTGGTGATGAGCTCTACCACTGTCTGGAAGGAAATCACAAGAAACAGCCTTTTGAGGAATCTACAAGAAA
TACTGAAGATAGTTTAAAGATTTTCTAGATTCTACTTCAAAGACTCCTCCTCAAGAAGAATTACCTACTCGAGTGTC
ATCTCCTGTATTTGGAGCTACCTCTAGTATCAAAAGTGGTTTAGATTTGAATACAAGTTTGTCCCCTTCTCTTTT
ACAGCCTGGGAAAAAAAACATCTGAAAACACTCCCTTTTAGCAACACTTGATATCTAGATTAGAAAAAACTAG
ATCAAAATCTGAAGATAGTGCCCTTTTACACATCACAGTCTTGGGTCTGAAGTGAACAAGATCATTATCCAGTC
ATCTAATAAACAGATACTTATAAATAAAAATATAAGTGAATCCCTAGGTGAACAGAATAGGACTGAGTACGGTAA
AGATTCTAACTGATAAACATTTGGAGCCCCTGAAATCATTGGGAGGCCGAACATCCAAAAGGAAGAAAAGTGA
GGAAGAAAGTGAACATGAAGTAAGCTGCCCCAAGCTTCTTTTGATAAGAAAATGCTTTCCCTTTTCCAATGGA
TAATCAGTTTTTCCATGAATGGAGACTGTGTGATGGATAAACCTCTGGATCTGTCTGATCGATTTTCAGCTATTCA
GCGTCAAGAGAAAAGCCAAGGAAGTGAGACTTCTAAAAACAAATTTAGGCAAGTGACTCTTTATGAGGCTTTGAA
GACCATTCCAAAGGGCTTTTCTCAAGCCGTAAGGCCTCAGATGGCAACTGCACGTTGCCCAAAGATTCCCCAGG
GGAGCCCTGTTTACAGGAATGCATCATCTTCAGCCCTTGAATAAATGCTCTCCAGACAATAAACCATCATTACA
AATAAAAGAAGAAAATGCTGTCTTTAAATTCCTCTACGTCCACGTGAAAGTTTGGAGACTGAGAATGTTTTAGA
TGACATAAAGAGTGCTGGTTCTCATGAGCCAATAAAAATACAAACCAGGTGAGACCATGGAGGATGTGAACCTGC
ATCAGTTCTTCAGTTAAATCCATGTAGAACTGGTAAAATAAAGTCTCTACAAAACAACCAAGATGTATCCTTTGA
AAATATCCAGTGAGATATAGATCCGGGAGCAGACCTTTCTCAGTATAAAATGGATGTTACTGTAATAGATACAAA
GGATGGCAGTCAGTCAAAATTAGGAGGAGAGACAGTGGACATGGACTGTACATTGGTTAGTGAAACCGTTCTCTT
AAAAATGAAGAAGCAAGAGCAGAAGGGGAGAAAAAGTTCAAATGAAGAAAGAAAAATGAATGATAGCTTGAAGA
TATGTTTGATCGGACAACACATGAAGAGTATGAATCCTGTTTGGCAGACAGTTTCTCCCAAGCAGCAGATGAAGA
GGAGGAATTGTCTACTGCCACAAAGAACTACACACTCATGGTGATAAACAAGACAAAGTCAAGCAGAAAGCGTT
TGTGGAGCCGTATTTTAAAGGTGATGAAAGAGAGACTAGCTTGCAAAATTTTCTCATATTGAGGTGGTTCGGAA
AAAAGAGGAGAGAAGAAAAGTCTTGGGCACACGTGTAAGGAATGTGAAATTTATTATGCAGATATGCCAGCAGA
AGAAAGAGAAAAGAAATTGGCTTCTGCTCAAGACACCGATTCCGCTACATTCCACCCAACACACCAGAGAATTT
TTGGGAAGTTGGTTTTCTTCCACTCAGACTTGTATGGAAAGAGGTTATATTAAGGAAGATCTTGATCCTTGTC
TCGTCCAAAAGACGTGAGCCTTACAACGCAATATTTTCTCCAAAAGGCAAGGAGCAGAAGACATAGACGTTGAA
ACAGAAACAGAAGGATGAAGGACAGTTTCTTCTTCTTAGTTATTTATAGTTAAAGTTGGTACTAAACATTGATT
TTTTTGATCTTCTGTAAATGGATTTATAAATCAGTTTTCTATTGAAAATGTTTGTGATATTTTGTCTTTTGCACCT
TTAAACAATAAGGCGCTTTTCATTTTGCACCTTAACCTAAGAGTTTTTACTTTATGTAGTGATACCTAATACAAT
TTTGAAATACAAAAAAA

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FIGURE 304

MNISGSSCGSPNSADTSSDFKDLWTKLKECHDREVQGLQVKVTKLKQERILDAQRLEEFFTKNQQLREQQKVLHE
TIKVLEDRLRAGLCDRCVTEEHMRKKQQEFENIRQQNLKLITELMNERNTLQEENKKLSEQLQQKIENDQQHQA
AELECEEDVIPDSPITAFSFSGVNRLRRKENPHVRYIEQTHTKLEHSVCANEMRKVSKSSTHPQHNPNEINEILVA
DTYDQSQSPMAKAHGTSSYTPDKSSFNLATVVAETLGLGVQEESEETQGPMSPLGDELYHCLEGNHKKQPFEESTR
NTEDSLRFSdstskTPPQEELPTRVSSPVFGATSSIKSGLDLNTSLSPSLLPQGGKKHLKTLFPSNTCISRLEKT
RSKSEDSALFTHHSLGSEVNKII IQSSNKQILINKNISESLGEQNRTEYGKDSNTDKHLEPLKSLGGRTSKRKKT
EEESEHEVSCPQASFDKENAFPPMDNQFSMNGDCVMDKPLDLSDRFSAIQRQEKSQGSETSKNKFRQVTLYEAL
KTIPKGFSSSRKASDGNCTLPKDSPEPCSQECIILQPLNKCSPDNKPSLQIKEENAVFKIPLRPRESLETENVL
DDIKSAGSHEPIKIQTRSDHGGCELASVLQLNPCRTGKIKSLQNNQDVSFENIQWSIDPGADLSQYKMDVTVIDT
KDGSQSKLGGETVMDCTLVSETVLLKMKKQEQKGEKSSNEERKMNDLED MFDRTTHEEYESCLADSFSAADE
EEELSTATKKLHTHGDKQDKVKQKAFVEPYFKGDERETSLQNFPHIEVVRKKEERRKLLGHTCKECEIYYADMPA
EEREKKLASCSRHRFRYIPNTPENFWEVGFPSTQTCMERGYIKEDLDPCPRPKRRQPYNAIFSPKGKEQKT

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FIGURE 305

GGGAAGTGCTGTTGGAGCCGCTGTGGTTGCTGTCCGCGGAGTGGAAGCGCGTGCTTTTGTGTTGTGTCCCTGGCCA
TGGCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCCCTGCGCGGGAGCGCCGAAATCGTGGCCGAGTTCTTCTCAT
TCGGCATCAACAGCATTATATATCAGCGTGGCATATATCCATCTGAAACCTTTACTCGAGTGCAGAAATACGGAC
TCACCTTGCTTGTAAGTACTGATCTTGAGCTCATAAAAATACCTAAATAATGTGGTGGAACAAGTAAAGATTGGT
TATACAAGTGTTTCAGTTTCAGAAACTGGTTGTAGTTATCTCAAATATTGAAAGTGGTGAGGTCTCGAAAGATGGC
AGTTTGATATTGAGTGTGACAAGACTGCAAAAAGATGACAGTGCACCCAGAGAAAAGTCTCAGAAAGCTATCCAGG
ATGAAATCCGTTTCAGTGATCAGACAGATCACAGCTACGGTGACATTTCTGCCACTGTTGGAAGTTTCTTGTTTCAT
TTGATCTGCTGATTTATACAGACAAAGATTTGGTTGTACCTGAAAAATGGGAAGAGTCGGGACCACAGTTTATTA
CCAATTCTGAGGAAGTCCGCCTTCGTTTCATTTACTACTACAATCCACAAAGTAAATAGCATGGTGGCCTACAAAA
TTCCTGTCAATGACTTCAGAGATGACATGAGGAAAAATAATGTAATTGTAATTTTGAAATGTGGTTTTCTCGAAATCA
GGTCATCTATAGTTGATATGTTTTATTTTCATTGGTTAATTTTTACATGGAGAAAACCAAAATGATACTTACTGAA
CTGTGTGTAATTGTTTCCTTTATTTTTTTGGTACCTATTTGACTTACCATGGAGTTAACATCATGAATTTATTGCA
CATTGTTCAAAAGGAACCAGGAGGTTTTTTTGTCAACATTGTGATGTATATTCCTTTGAAGATAGTAACTGTAGA
TGGA AAAACTTGTGCTATAAAGCTAGATGCTTTCCTAAATCAGATGTTTTGGTCAAGTAGTTTGACTCAGTATAG
GTAGGGAGATATTTAAGTATAAAAATACAACAAAGGAAGTCTAAATATTCAGAATCTTTGTTAAGGTCCTGAAAGT
AACTCATAATCTATAAACAATGAAATATTGCTGTATAGCTCCTTTTGACCTTCATTTTCATGTATAGTTTTCCCTA
TTGAATCAGTTTCCAATTATTTGACTTTAATTTATGTAACCTGAACCTATGAAGCAATGGATATTTGTACTGTTT
AATGTTCTGTGATACAGAACTCTTAAAAATGTTTTTTTCATGTGTTTTATAAAATCAAGTTTTAAGTGAAAGTGAG
GAAATAAAGTTAAGTTTGTTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 306

MALQLSREQGITLRGSAEIVAEFFSFGINSILYQIRGIYPSETFTRVQKYGLTLLVTTDLELIKYLNNVVEQLKDW
LYKCSVQKLVVISNIESGEVLERWQFDIECDKTAKDDSAPREKSQKAIQDEIRSVIRQITATVTFLPLEVSCS
FDLLIYTDKDLVPEKWEESGPQFITNSEEVRLRSFTTTIHKVNSMVAYKIPVND

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FIGURE 307

AGCCGCGGCCTCAACTAAAAGTGGCCATTGACCTTTCAAGCTTTTCGAGCAGTGATGCAATAGAATAGTATTTCAA
AGAAAAATGCTTATCGAAATTTTGGATCCGGTTTTCCCGTGATTGTTAAGGGTTCTTTTAAAAAGTAGGTCACA
TTTCAAGTAGGTCATATTTTCGGGGGCGGGTGCGCAGACAAGGAGATGAGTTTCCACTAAGGCCAGGGGGCCTCCA
ACGGGGTTGGAGGTGAGAATCCCAGGTAGGGTAGAGGTGCCGAGATCCTTCCGAATCCCAGCCCTGGGGCGTCAG
CCCTGCAGGGAATGGCAGAGACACTCTCCGGACTGAGGGAACCGAGGCCAGTCACCAAGCCCTTCCGGGCGCGC
AGGCGATCAGTGGGTGACCGCGGCTGCGAGGGACTTTGTTCATCCGTCTCCAGGATCTGGGGAGAAAGAGCCCCA
TCCCTTCTCTCTCTGCCACCATTTTCGGACACCCCGCAGGGACTCGTTTTTGGGATTCGCACTGACTTCAAGGAAGG
ACGCGAACCCCTTCTCTGACCCAGCTCGGGCGGCCACCTGTCTTTGCCGCGGTGACCCCTTCTCTCATGACCCTGC
GGTGCCTTGAGCCCTCCGGGAATGGCGGGGAAGGGACGCGGAGCCAGTGGGGGACCGCGGGGTGCGCGGAGGAGC
CATCCCCGCGAGGCGGCGCGTCTGGCGAAGGCCCTGCGGGAGCTCGGTGAGACAGGATGGTACTGGGGAAGTATGA
CTGTTAATGAAGCCAAAGAGAAATTAAAAGAGGCACCAGAAGGAACCTTCTTGATTAGAGATAGCTCGCATTGAG
ACTACCTACTAACAATATCTGTATAAACATCAGCTGGACCAACTAATCTTCGAATCGAATACCAAGACGGAAAAT
TCAGATTGGACTCTATCATATGTGTCAAATCCAAGCTTAAACAATTTGACAGTGTGGTTCATCTGATCGACTACT
ATGTTTCAGATGTGCAAGGATAAGCGGACAGGTCCAGAAGCCCCCGGAACGGCACTGTTACCTTTATCTGACCA
AACCCTCTACACGTCAGCACCATCTCTGCAGCATCTCTGTAGGCTCACCATTAAACAAATGTACCGGTGCCATCT
GGGACTGCCTTTACCAACAAGACTAAAAGATTACTTGGAAGAATATAAATTCAGGTATTAATGTTTCTCTTTT
TTTAAACATGTCTCACATAGAGTATCTCCGAATGCAGCTATGTAAAAGAGAACCAAACTTGAGTGCTCTGGATA
ACTATATGGAATGCTTTCTAAGAACAGCTGAAGCTAATCTAATTTAAATTTAACAGCTTGAAGAGGTAGCTAGGT
GTTTAAAGTTCCTCCAGATACTTTTACCTGAGTGATGCTTCCCTTCCTAAGGCTGACCAAGACCTGTTGATCCTT
TTAGATTAAAAATAAAATGTGCGCATGTAAAGGCTGAAGTCGCGTTTTATCAGAATGCCTTGCCTTCTTAGGTTCT
TTTCCATTATGTCAAAGGTCCAGGCTCCAGTAGGAGAGAAAGAACTCCTCATAGGAATACTGAAGAAGTGGGAAG
GAACCAAGCTGACACAGGCCTCACTGCAATTTGATATGCCTGCTGATCAGAGTCTCTTGGGCATTTTATATTTTG
CATTCTGATGTACCTAGGAGTTTTGTTAAACAGATGATGTATGTGAGTATTTATCCCATTTTATGCAATTAACCA
AATCAACCAAAAAAAGTGACCATGAAGTCTGTATTTGTCTTTTTTACTACATGTAGGAACCTCTCATGTGAATGAG
TACTGTAGTAATCCATTCTATGGGAGCCTTATTTTCAGAAATATTTCAAACCTGGTGCAAATGGAAAAGACTTTCTC
TTTTCTTTTAAAGCTAAAGACAAGAATATCATGTCTATACAGGTGCAACTCAATCCCCGTTAATAAAAACCAATGT
AGGTATAGGCATTCTACCCTTTGAATAGCTGTGTCCCAACCTGTTGCCATTGATTTTTTGGAAATGGCTTTAGA
AATATCCAAGTTGTCCTTGAATTGTCTAACCATGGACATAAACAGTTGTCTCCCTTCTACTGTGTAGAATACTTT
GACTTAATTTTCTTCCAGATACAGGGGGATACCTGCCTGTTTTTCAAAGTGTTTATTTACTGCTGTTACTATTTG
ATTAGAATGTATTAAATAAAAAAACCTGATTTCT

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FIGURE 308

MTLRCLEPSGNGGEGTRSQWGTagsAEePSPQAArLAKALRELgQTGWYwGSMTVNEAKEKLKEAPEGtFLIRDS
SHSDYLLTISVKTSAGPTNLRIEYQDGKFRldSIICVKSklKQFDSVVHLIDYYVQMCKDKRTGPEAPRNGTVHL
YLTkPLYTSAPSLQHLcRLTINKCTGAIWGLPLPTRLKDYLEEYKFQV

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FIGURE 309

AGCCGCGGCCTCAACTAAAAGTGGCCATTGACCTTTCAAGCTTTTCGAGCAGTGATGCAATAGAATAGTATTTCAA
AGAAAAATGCTTATCGAAATTTTGGATCCGGTTTTCCCGTGATTGTTAAGGGTTTCTTTTAAAAAGTAGGTCACA
TTTCAAGTAGGTCATATTTTCGGGGCGGGTGCGCAGACAAGGAGATGAGTTTCCACTAAGGCCAGGGGGCCTCCA
ACGGGGTTGGAGGTGAGAATCCAGGTAGGGTAGAGGTGCCGAGATCCTTCCGAATCCCAGCCCTGGGGCGTCAG
CCCTGCAGGGAATGGCAGAGACACTCTCCGGACTGAGGGAACCGAGGCCAGTCACCAAGCCCCTTCCGGGCGCGC
AGGCGATCAGTGGGTGACCGCGGCTGCGAGGGACTTTGTCATCCGTCCTCCAGGATCTGGGGAGAAAGAGCCCCA
TCCCTTCTCTCTCTGCCACCATTTTCGGACACCCCGCAGGGACTCGTTTTGGGATTTCGCACTGACTTCAAGGAAGG
ACGCGAACCCTTCTCTGACCCAGCTCGGGCGGCCACCTGTCTTTGCCGCGGTGACCCTTCTCTCATGACCCTGC
GGTGCCTTGAGCCCTCCGGGAATGGCGGGGAAGGGACGCGGAGCCAGTGGGGGACCGCGGGGTGCGCGGAGGAGC
CATCCCCGCGAGGCGGCGCTCTGGCGAAGGCCCTGCGGGAGCTCGGTGAGACAGGATGGTACTGGGGAAGTATGA
CTGTTAATGAAGCCAAAGAGAAATTTAAAGAGGCACCAGAAGGAACTTTCTTGATTAGAGATAGCTCGCATTTCAG
ACTACCTACTAACAATATCTGTTAAACATCAGCTGGACCACTAATCTTCGAATCGAATACCAAGACGGAAAAAT
TCAGATTGGACTCTATCATATGTGTCAAATCCAAGCTTAAACAATTTGACAGTGTGGTTTCATCTGATCGACTACT
ATGTTTCAGATGTGCAAGGATAAGCGGACAGGTCCAGAAGCCCCCGGAACGGCACTGTTACCTTTTATCTGACCA
AACCCTCTACACGTCAGCACCATCTCTGACGATCTCTGTAGGCTCACCATTAAACAATGTACCGGTGCCATCT
GGGGACTGCCCTTTACCAACAAGACTAAAAGATTACTTGGAAGAATATAAATTCAGGTATTAAATGTTTCTCTTTT
TTTAAACATGTCTCACATAGAGTATCTCCGAATGCAGCTATGTAAAAGAGAACCAAAACCTTGAGTGCTCTGGATA
ACTATATGGAATGCTTTCTAAGAACAGCTGAAGCTAATCTAATTTAAATTTAACAGCTTGAAGAGGTAGCTAGGT
GTTTAAAGTTCCCTCCAGATACTTTTACCTGAGTGATGCTTCCCTTCCTAAGGCTGACCAAGACCTGTTGATCCTT
TTAGATTAAAAATAAAATGTGCGATGTAAAGGCTGAAGTCGCGTTTTATCAGAATGCCTTGCCCTTCTTAGGTTCT
TTCCATTATGTCAAAGGTCCAGGCTCCAGTAGGAGAGAAAGAACTCCTCATAGGAATACTGAAGAAGTGGGAAG
GAACCAAGCTGACACAGGCCTCACTGCAATTTGATATGCCTGCTGATCAGAGTCTCTTGGGCATTTTATATTTG
CATTCTGATGTACCTAGGAGTTTTGTTAAACAGATGATGTATGTGAGTATTTATCCATTTTATGCAATTAACCA
AATCAACCAAAAAAAGTGACCATGAAGTCCTGTATTTGTCTTTTTACTACATGTAGGAACTCTCATGTGAATGAG
TACTGTAGTAATCCATTCTATGGGAGCCTTATTTTCAGAAATATTTCAAACCTGGTGCAAATGGAAAAGACTTTCTC
TTTTCCTTTAAAGCTAAAGACAAGAATATCATGCTATACAGGTGCAACTCAATCCCCGTTAATAAAAAACCAATGT
AGGTATAGGCATTCTACCTTTTGAATAGCTGTGTCCCAACCTGTTGCCATTGATTTTTTGGAAATGGCTTTAGA
AATATCCAAGTTGTCTTGAATTGTCTAACCATGGACATAAACAGTTGTCTCCCTTCTACTGTGTAGAATACTTT
GACTTAATTTTCTTCCAGATACAGGGGGATACCTGCCTGTTTTTCAAAGTGTTTATTTACTGCTGTTACTATTTG
ATTAGAATGTATTAAATAAAAAAACCTGATTTCT

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FIGURE 310

MTLRCLPSGNGGEGTRSQWGTAGSAEESPQAARLAKALRELGQTGWYWGSMTVNEAKEKLKEAPEGTFLIRDS
SHSDYLLTISVKTSAGPTNLRIEYQDGKFRLDSCIICVKSCLKQFDSVVHLIDYYVQMCKDKRTGPEAPRNGTVHL
YLTkPLYTSAPSLQHLcRLTINKCTGAIWGLPLPTRLKDYLEEYKFQV

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FIGURE 311

GGGTGAGCAAAGGGGCGGGTCCCTGGCTGCTGTGGCCTCCCCTGACCCCTCCCCCGCTGCTGGGGTCCTCGGC
CAAGCCCCCTTCTCACTGGACTGAGACATGAGGCTGAGCTGGTTCCGGGTCCCTGACAGTACTGTCCATCTGCCTG
AGCGCCGTGGCCACGGCCACGGGGGCCGAGGGCAAAGGAAGCTGCAGATCGGGGTCAAGAAGCGGGTGGACCAC
TGTCCCATCAAATCGCGCAAAGGGGATGTCCTGCACATGCACTACACGGGGAAGCTGGAAGATGGGACAGAGTTT
GACAGCAGCCTGCCCCAGAACCAGCCCTTTGTCTTCTCCCTTGGCACAGGCCAGGTCATCAAGGGCTGGGACCAG
GGGCTGCTGGGGATGTGTGAGGGGGAAAAGCGCAAGCTGGTGATCCCATCCGAGCTAGGGTATGGAGAGCGGGGA
GCTCCCCAAAGATTCCAGGCGGTGCAACCCTGGTGTTGAGGTGGAGCTGCTCAAAATAGAGCGACGAAGTGA
CTGTAACCAGACTGGGGAGGGGCAGGGGGAGAGGCCCCCATCAGGGACCAGACTGTTCCAAAAAAAAAACAAAA
ACAAAAACAAACAAAAAAACACTTAAAAGCCCAAGGAGTAAGCCTGTGTGTTTGTGGGCCCTGAGAGACTCAGAG
ACCTCAGCTCCAGCATACCCACACCTTCTCCTTTCCC

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FIGURE 312

MRLSWFRVLTVLSICLSAVATATGAEGKRKLQIGVKRVDHCPKSRKGDVLHMHYTGKLEDGTEFDSSLPQNP
FVFSLTGQVIKGWDQGLLGMCEGEKRKLVIPSELGYGERGAPPKIPGGATLVFEVELLKIERRTEL

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FIGURE 313

ACTCAGTGTTCGCGGGAGCCGCACCTACACCAGCCAACCCAGATCCCGAGGTCCGACAGCGCCCGGCCAGATCC
CCACGCCTGCCAGGAGCAAGCCGAGAGCCAGCCGGCCGGCGCACTCCGACTCCGAGCAGTCTCTGTCTTCGACC
CGAGCCCCGCGCCCTTTCCGGGACCCCTGCCCCGCGGGCAGCGCTGCCAACCTGCCGGCC**ATGG**AGACCCCGTCC
CAGCGGCGCGCCACCCGCAGCGGGGCGCAGGCCAGCTCCACTCCGCTGTGCGCCACCCGCATCACCCGGCTGCAG
GAGAAGGAGGACCTGCAGGAGCTCAATGATCGCTTGGCGGTCTACATCGACCGTGTGCGCTCGCTGGAAACGGAG
AACGCAGGGCTGCGCCTTCGCATCACCGAGTCTGAAGAGGTGGTCAGCCGCGAGGTGTCCGGCATCAAGGCCGCC
TACGAGGCCGAGCTCGGGGATGCCCGCAAGACCCCTTGACTCAGTAGCCAAGGAGCGCGCCCGCCTGCAGCTGGAG
CTGAGCAAAGTGCCTGAGGAGTTTAAGGAGCTGAAAGCGCGCAATACCAAGAAGGAGGGTGACCTGATAGCTGCT
CAGGCTCGGCTGAAGGACCTGGAGGCTCTGCTGAACTCCAAGGAGGCCGCACTGAGCACTGCTCTCAGTGAGAAG
CGCACGCTGGAGGGCGAGCTGCATGATCTGCGGGGCCAGGTGGCCAAGCTTGAGGCAGCCCTAGGTGAGGCCAAG
AAGCAACTTCAGGATGAGATGCTGCGGCGGGTGGATGCTGAGAACAGGCTGCAGACCATGAAGGAGGAAGTGGAC
TTCCAGAAGAACATCTACAGTGAGGAGCTGCGTGAGACCAAGCGCCGTCATGAGACCCGACTGGTGGAGATTGAC
AATGGGAAGCAGCGTGAGTTTGAGAGCCGGCTGGCGGATGCGCTGCAGGAAGTGCAGGGCCAGCATGAGGACCAG
GTGGAGCAGTATAAGAAGGAGCTGGAGAAGACTTATTCTGCCAAGCTGGACAATGCCAGGCAGTCTGCTGAGAGG
AACAGCAACCTGGTGGGGGCTGCCCCACGAGGAGCTGCAGCAGTCGCGCATCCGCATCGACAGCCTCTCTGCCAG
CTCAGCCAGCTCCAGAAGCAGCTGGCAGCCAAGGAGGCGAAGCTTCGAGACCTGGAGGACTCACTGGCCCGTGAG
CGGGACACCAGCCGGCGGCTGCTGGCGGAAAAGGAGCGGGAGATGGCCGAGATGCGGGCAAGGATGCAGCAGCAG
CTGGACGAGTACCAGGAGCTTCTGGACATCAAGCTGGCCCTGGACATGGAGATCCACGCCTACCGCAAGCTCTTG
GAGGGCGAGGAGGAGAGGCTACGCCTGTCCCCAGCCCTACCTCGCAGCGCAGCCGTGGCCGTGCTTCCTCTCAC
TCATCCCAGACACAGGGTGGGGGCAGCGTCACCAAAAAGCGCAAAGTGGAGTCCACTGAGAGCCGCAGCAGCTTC
TCACAGCACGCACGCACTAGCGGGCGCGTGGCCGTGGAGGAGGTGGATGAGGAGGGCAAGTTTGTCCGGCTGCGC
AACAAGTCCAATGAGGACCAGTCCATGGGCAATTGGCAGATCAAGCGCCAGAATGGAGATGATCCCTTGCTGACT
TACCGGTTCCCAACAAAGTTACCCCTGAAGGCTGGGCAGGTGGTGACGATCTGGGCTGCAGGAGCTGGGGCCACC
CACAGCCCCCTACCGACCTGGTGTGGAAGGCACAGAACCTGGGGCTGCGGGAACAGCCTGCGTACGGCTCTC
ATCAACTCCACTGGGGAAGAAGTGGCCATGCGCAAGCTGGTGCGCTCAGTGAAGTGTGGTTGAGGACGACGAGGAT
GAGGATGGAGATGACCTGCTCCATCACCAACATGTGAGTGGTAGCCGCCGCT**TG**AGGCCGAGCCTGCACTGGGGCC
ACCCAGCCAGGCCTGGGGGCAGCCTCTCCCCAGCCTCCCCGTGCCAAAAATCTTTTCATTAAAGAATGTTTGAA
CTTT

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FIGURE 314

METPSQRRATRSGAQASSTPLSPTRITRLQEKEDLQELNDR LAVYIDRVRSLETENAGLRLRITESEEVVSREVS
GIKAAYEAE LGDARKTLD SVAKERARLQLELSKVREEFKELKARNTKKEGDLIAAQARLKDLEALLNSKEAALST
ALSEKRTLEGELHDLRGQVAKLEAALGEAKKQLQDEMLRRVDAENRLQTMKEELDFQKN IYSEELRETKRRHETR
LVEIDNGKQREFESRLADALQELRAQHEDQVEQYKKELEKTYSAKLDNARQSAERNSNLVGAAHEELQQSRIRID
SLSAQLSQLQKQLAAKEAKLRDLED SLARERDTSRLLAEKEREMAEMRARMQQQLDEYQELLDIKLALDMEIHA
YRKLEGE EERLRLSPSPTSQRSRGRASSHSSQTQGGGSVTKKRKLESTESRSSFSQHARTSGRVAVEEVDEEGK
FVRLRNKS NEDQSMGNWQIKRQNGDDPLLTYRFPPKFTLKAGQVVTIWAAGAGATHSPPTDLVWKAQNTWGC GNS
LRTALINSTGEEVAMRKLVR SVTVVEDDEDEDGDDLHHHHVSGSRR

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FIGURE 315

CCAAGCCCATGAGGGCCGCGCGCCCGGCGCGGGTGCTGACGAGACGGAGCTCCTGGCCCCCGAGGAGGAGCAGA
GGATCAATGCGGTTCAAGAATCGATTCCAGCGGTTTCATGAACCATCGAGCTCCAGCCAATGGCCGCTACAAGCCA
ACTTGCTATGAACATGCTGCTAACTGTTACACACACGCATTCTCATTGTTCCGGCCATCGTGGGCAGTGCCCTC
CTCCATCGGCTGTCTGATGACTGCTGGGAAAAGATAACAGCATGGATTTATGGAATGGGACTCTGTGCCCTCTTC
ATCGCTTCTACAGTATTTACATTGTATCATGGAAAAAGAGCCACTTAAGGACAGCGGAGCATTTGTTTTACATG
TGTGATAGAATGGTTATCTATTTCTTCATTGCTGCTTCTTATGCTCCATGGTTAAATCTTCGTGAACCTGGACCC
CTGGCATCTCATATGCGTTGGTTTATCTGGCTCATGGCAGCTGGAGGAACCATTTATGTATTTCTTACCATGAA
AAATATAAGGTGGTTGAACTCTTTTTCTATCTCACAATGGGATTCTCTCCAGCCTTGGTGGTGACATCAATGAAC
AACACCGATGGACTTCAGGAACCTGCCTGTGGGGGCTTAATTTATTGCTTGGGAGTTGTGTTCTTCAAGAGTGAT
GGCATCATTTCCATTTGCCACGCCATCTGGCACCTGTTTGTGGCCACGGCAGCTGCAGTGCATTACTACGCCATT
TGGAATACCTTTACCGAAGTCCTACGGACTTTATGCGGCATTTATGACCAATCTGTACTAATTCTCCAAACCAG
TATTATTTCAATTATGGCACTTGGGAGTGGGGTGAGAGCTAAACATTGCACAGGGCAAAGAAAAAAATAACTGC
ACTGACTTTATATCTTTTGAATATAATTACTGTGAAAGTATAAAGGCTGTGTTCTGGAATTTTCTGCCTCACAGC
AAATAAATAAGGTAGTGAATTAATTATTCATTCCATTCCACTATCATGAAGGACTCTGAATAGACTTGGCCAACT
GATGTTTACAAACCAGACTTTTATATTTTAAATTTTACAGATTTTACTACATGATTTTTCTAAATTACTATGTCAG
GTTGTAAAAGTCAGTGCAATAACAAACCTTCCTTTTTAAGAAGAAAATTGTTTCTATTACTTTCCCATTCACTAG
GTAAAGAATCATGGACAGAACTTACACTACTTTTTTACCATGTTTCATCTTGGCATAACATGGTTCTTTTTTAAAT
AGAACTTTTAGTTTTTTGTAAATTTTTAAAAAATATTTTCATTGATATGCATCTCTGCAGGTCCTCATTATGTT
GTAAATTTTTTGGAGCAAGCAGTCAACATTCCACAAACGAACAAACATTATACCTCTTCTGATAGTTTTATTAAGC
ATGGAGAAATTGCCAATTTTTTAAAACTGCAGTTTTCCAAACTTTTCTGCCAACCTCTTACTCTGAATTCAGTGC
TGCTTTGGGACATATACTTGACCTAGCTTGGTTTACCAGTGATGGAAAAGTATTTTGATATCATTAACTTTTTCA
AAAGATCCAACCTTTTTCTCTATGCCTTTGCCACATTCTCTTCAGGGTCTCTTTCCACAGCGGATAAATGTTTTTT
CTGTATTATGACAGTATTGTTGTGATGGCCATCTGCTGGAACTCCTGAAGAGCATTATGTATTACAGTGAGCAG
TTGTATTGCCTGTTTGGTGCCCAATGGTTAAGTCATTGTCACTTAGCTTTATATTGTCAGTTTGATATTTATTTT
AAATTGTGGAAC TAGATGCATAAATTCACATTTCTGCCTTTCCCTTTGCATCTTCTCATATATTGTGTTTTTTTTT
TTTTTCTAGAAAAAATATTTAAAGCATTGTTTGACAGGTAGAACTCATGTATCTGTAGTCCATGAGTTATATC
CTGGCTCAGTGGAGTGATATTTATGTATTATTTTTACTTTTCTCTCAGTGTCTTATATTAAGATTAACATGTTGT
TAATAGTTGCTTTGTTGATTAATCTCTCTTGTGGTGTTTAAATAAATGAAATAGGCTTGCTTTAGATCGGGTG
CTGATATTGCCTGTTTCCTAGTAATGGGCTGATCAAAATGATCAGTGAATTCTTGGTTTGATGATAACCTTATTA
ATTGAAATTTTTTACTGATGTGGCTTTAAAGAGGTTTATTTTGTATATGTTTAGAACTCTCTGATTTTGATGAA
TTATATGGGAGTGAGAAACAGAAGAAGTGGTATTTGCTGGCGAGTTAAATAGGCAAGGTACCCAGTGATAACACC
AACCAAACCACTCCTATCTGCATGATTCTGAACATCTGGATGCCTGTTGTTTTACTGTGTATATTTTATTTTAA
TATATTAACCTTTGTGGATTCAATTAAGGTCTACTCAAAGTAACACTGTCCAAACCACTAATATGTATGTAAAAA
TTGTGCTGTATACTACAATAAAGTTGTTACTTGGATTTGTTCCAAAAA

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FIGURE 316

MRFKNRQRFMNHRA PANGRYKPTCYEHAANCYTHAFLIVPAIVGSALLHRLSDDCWEKITAWIYGMGLCALFIA
STVFHIVSWKKSHLRTAEHCFHMCDRMVIYFFIAASYAPWLNLRGLPLASHMRWFIWLMAAGGTIYVFLYHEKY
KVVELFFYLTMGFSPALVVTSMNNTDGLQELACGGLIYCLGVVFFKSDGIIPFAHAIWHLEFVATAAAVHYIAWK
YLYRSPTDFMRHL

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FIGURE 317A

GGGGGAGGGAAACGGAGCAGTAACAAGTATCCCAGAGGGTGCTGCTGAGGCGACGATGGCCGAGGGGCCCCGAGGA
AGCCCCAGGGCCACCCTCCCAGGGCAGGACGATGGCGGGGGGGACCACGAGCCCCGTCCCTTCCCTGAGAGGCCCTCC
TACCACCGCCGTCCCATGCCCCCGCGACGACCCCCAGGCCGAACCCAGGCCCGGGCCGCGCCACAGCCCCGGG
CCTCGCGGCTGCCGCCGAGCCGACAAATTGGAGCCGCCGCGGAGCTCAGGAAGCGCGGGGAGGCGGCCTCCGG
CTCCGGTGACAGAGCTGCAGGAGCAGGCGGGCTGCGAGGCGCCGAAGCCGCGGCGCCACGAGAGAGACCAGCTCG
GCTGAGCGCCCCGCGAGTACTCCCGCAAGTGCACGAGTGGCTGTGGCAGTCCTACTGCGGCTACCTCACCTGGCA
CAGCGGCCTGGCCGCCTTCCCAGCCTACTGCAGCCCCCAGCCCTCCCCGCAAAGCTTCCCTTCGGGCGGCGCTGC
AGTCCCCCAGGCCCGCGGCGCCGCGCCCGCCCGCAGCTGGGCTATTACAACCCCTTCTACTTCCCTGAGCCCCGGGGC
CGCGGGGCTGACCCGCGGACAGCTGCCGGCATCAGCACCCCTGCTCCAGTCGCGGGCCTGGGACCCCGGGCTCC
TCACGTGCAGGCGTCGGTCCGGGCCACTCCAGTGACGAGGGTAGGATCCGAGCCCCCTTCGCGAAGCCCCGAGCGA
GACCGGGCGACAGGCAGGCAGAGAATATGTTATTCCATCCTTGGCCACAGATTTATGGCAGAGATGGTGGATTT
CTTTATTCTCTTCTTTATAAAAGCAACCATTGTCTTAAGCATTATGCACCTCAGTGGGATAAAGGATATCTCTAA
GTTTGCTATGCATTATATAATAGAAGAAATAGATGAAGACACATCAATGGAAGACTTGCAGAAAATGATGGTTGT
GGCACTTATATACAGATTATTAGTTTGTCTTATGAGATAATTTGCATTTGGGGAGCAGGTGGAGCTACCCAGG
GAAGTTCCTGCTGGGGCTTCGAGTTGTGACATGTGATACATCAGTGCTTATTGCACCAAGTCGGGTTTTAGTGAT
TCCTTCTCAAATGTTAGCATTACAACGTCCACTATCCGAGCTTTGATCAAGAATTTTTCAATTGCTTCTTTTTT
CCCTGCTTTTCATCACACTGCTGTTTTTTTCAGCATAATCGAACAGCTTATGACATTGTAGCAGGAACCATTGTGGT
AAAAAGAAATGGGGTCAGATGATGCCCCCAAACCCTGATTTCCACACACTAAGACTAAATTATGTATCAAGGC
CATCAGTATCCCTGGGTTACACTAATTGATGATTTAGAAATTAAAGCAGTCACTCCAGTGTGATGCAGGTGACTA
CTCTGAAAGTATTGATTATACTTGAATGCCAAAGAAGCTTGTCCAGAAGAAAAACCTGTTAAATTCAAGTATTAAA
ATTTTTAGATCAAAAAAGGCAAATGATTTTTATAACAATGGACAATATATACTTTCTTAAGATCTAAGGTACTTTC
TTAAGATCTAAGAATTTGCTGAAAGCATTTCAGCTTTGAAATCTCCAAATGAAACTTTAAATTTATTTTGGTT
TATCCCAAAATAATGGAAAATGTCCAGTTGTGTTTTGTAAACACCTATGTAACCTCATCTTTTAGTTTACACTTCC
TGGGGAAATTTGCTTTTGGTGTTTAGAGGAGGGAATGAGAACACAAATTGGATAATCCACTGTCTCCCATCCAGG
AGGTGGTGAGTTGGCTACAAGAGAAAGGGACAAGTGAGGCAGGCCTAGCAGTTCCCTTACCTGAAGTTTTCAAAT
CCATACTGCAGTTCCCTCTCGTAATGATGTAACCTTACAACTATTCTTAATGCTTGAACATGTATTTAGGGGCAA
GTTTCTCATGATGATGAAAAAGTATCAAGTCATATTGCTATGTTAATTGGTTTTTTTTTTTAAAGGTAAGTTAG
TGATTACTGTTAATGGTGGGGGAGTAAGTTTTCACTGTAAATTGAACTTATAATTTATGTGCAAGTGTTTTCAGT
GCCCTGAATCAAACCTATAAATGTGGGGAGAAATCACCTCCATCAAACAGTTGCATATTTACTGTAAAAGTATTCC
CAGTATGTGTGCAGCATGAAGAAAGTATTAGTGCTTCTCAGTGTTCTCAGTGTAATTTCTATTTATATACAGCAT
ATTCACATACTACTTTCCTTATATTTTATATAGTTCTATGACTGTTGAAACATCAAGGAGTTAAAAAATCTTAA
TATTTATGATTAACCTAAGTACTATTAATAGCTTGCGAAATATTAGCAATTTCCCATTTAGGACTATCTCTC
TAAAGCAAGAGAGACTAGCATTCCCAGACATCATTCTAGGGTCTTTAAGCTCATTTTGGGCTGCTAAAGTTTGG
GGGAAATGTTACGCAAAGTGATACTGTGTATGTTGCCATTTTGCTTTATTCTTCTGTTGAAGCAAAATTTGTGGG
GTTTTATTATGTGTGTGTGCTTTTCTTAGATGTCCAGTTAGCTGTGCTGAGATATACCTGTACTATTTATGGTT
TAAGTTTTGATTCTTAGGTATTTTCTCCAGCTCTGACATTGTTTTCCAAAGACACACTAACTGCATTGCACAGT
TCAAAATTTGATTACTTAAGGGATCAATCTAGGTGGTGTCTTGGTCTTAAATTTAACAGCAAAACACAGCACATA
TCTATTATCACTATATTAATTTTCAAAGTTTTTCTGTGACGTTTAAACTGTGACAACAGATATTCACATTTGA
TTATAGAACTTAATGTCTATTAATAATTTTAGTACAAAATTTTATAAAACCGTGTTTTTCAAATAAGTTTATGT
CAAATCCAGCTTCCCAGAAACACTAATAATTAAGTACATCAATGTACTAAATAAATCATTACAGTTGCACCCATGG
GGAAGATTGTGTTACTGCCCTTCACAGTGAAAAAAGAAAAATCTTTTCAATTTTAAATTTAGGAGATGTTACGTA
ACTTGGCACTTTAGTAGTGTATACACTAGCATTAGTTTATACACCCTTTTGCCGCTGGGGATTCAAGTTGAAAT
GTCCCTCAATCATATAGGTCTGGAATACATCTTTCATTTCATAATTTCTGCTCAGATAATTGAATAGTTTGCCATC
GAGATTATTTTCAATTTATACTATAAAACAAAAGCAAACCTAGTCCAGTTAATTTTTTGTACTTAGAATATTGCAC
ATTTTCTATATATGAGTTATTAGATTAGTATCTATGTAGGTTTCAAGTCCAGATCCAACCATGGATTTCAGGTATTA
TACTGTATAACCTACAAAATACATAGAAGTATTATTTGCCTTCATAATAGAACCAAGAGTCTGTTTCAATTTA
TGAATTCAGTATTTGCACCGAGATTTTGATTCCCAAAGTTTGAAAAAATGACAAAACAACGAGGGAAGAAGGA
ACCAGACCTTAGTGCCACATATTTTTCTCTTGGGGTTGTAAGGTAGTCTCCTGCTTTCCAGAACACTTTATTATA

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FIGURE 317B

TTTCACTTATAGACCTGATTTTCTGTGTCAAAGTATAATTCTCATGCTGAAGCTGTAGCCTAAAAAGCCAAAAGA
AAGTTGTCTTCATTGTACAAACATATTCATCACTTTAACAATAAGGGAACAAAATTTAGTATTCAAGCTGAGTGA
GAATACTGGTTCAATGGACATGTCCCTAAGATAAACAGAAATTGGCAGTTAATTTAGGCGTCTAGAAAATCTCAG
TTCCCACCAGTAAAAATTATCCTGAGTAGCTAATGCACCTTGAGAAAAATCTGGCATACTGAATAAGTAACATTAA
CTTGGGAGCCAAGAGCTGGGTAAGCCTTACCTTTAGACTACTCTGTGACTACAGAAATAAAGCCAGCACTTTTGG
AACTAATAAGCCTTCACTTGTCAGTATCATAAAGAGTATTGCCCAACTGAACTTTGCTCCCACTGGTTTAATAGT
TACTTATTTCTGCCTAAGCACTCACCTTCCGATTTTACCCAAGTATATATATAGGATAGAAAAAATGCATTATA
TTTGAGAGCTCACTTCGCCCGAATTACAAAATGAGTGTTTTTAGATTCAAGTGACGGTAAAAGGATTTGTTCCCT
TCAGTGACTTGAGTGTTTTAGTTATGCATAAGTATTTCTAGCAAAGGAAGGGTAGAAAGGAATTGAAAATTAATT
TACACTAGTTGCTACTTGGAATAAAGGGCTTTTTGAGGGGGGTATGGATATTAAATGTTTTCGTTATATACTTA
TCCCTATTAAAACAGGCAGTTGTTTCTTTGAATATGCCTAAATAACAGTATTCTTAAAATCTGACAGACAAGTAA
CATGTCAATTACTTGATATTCCTTGTCTCCAGTACCACAGGCCACTCTTGACATCCCATGTTTGCCTGGATAAAG
TTCCTCATTTCAAACAGTATACATACTTCTTTGCAGTTCATTATAGTAAGGCTTAACCTGTAAACAGTATCTGAT
GGCCACCTATAAATAAAATTCAGCATTCTATTTTAAATAATTTGTATGCCACCAATTTGTATTATTTGTCTCAA
TAAATACTTAGTCATCGATGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 318

MAEGPEEARGHPPGQDDGGGDHEPVPSLRGPPTTAVPCPRDDPQAEPOAPGRPTAPGLAAAAAADKLEPPRELK
RGEAASGSGAELQEQAGCEAPEAAAPRERPARLSAREYSRQVHEWLWQSYCGYLTWHSGLAAFPAYCSPQPSQS
FPSGGAAVPQAAAPPPQLGYNPFYFLSPGAAGPDPRTAAGISTPAPVAGLGPRAPHVQASVRATPVTRVGSAA
PSRSPSETGRQAGREYVIPSLAHRFMAEMVDFFILFFIKATIVLSIMHLSGIKDISKFAMHYIIIEEIDEDTSMED
LQKMMVVALIYRLLVCFYEIICIWGAGGATPGKFLGLRVVTCDTSVLIAPSRVLVIPSSNVSITTSTIRALIKN
FSIASFFPAFITLLFFQHNRTAYDIVAGTIVVKRNGVR

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FIGURE 319A

GGTAATGCTTAAACTTCCTGCCTCTTTTGCCTCTACAGGAAAGAAGAAAGAACACAAGAAAGTGAAGTCCACTAG
GGATATTGTTTCCTTTTTCTGAACTTGGAACACTCCCTCTGGTGGTGGATTTTTTCAGGGTATTCTTTTCCTGA
AATCTCCACCCGTCCTCCTTTGGGCAGTACCGAACTACAGGCAGCTAAGAAAGTACATACTTCTAAGGGAGACCT
ACCTAGGGAGCCTCTTGTGTCACAACTTGCCTGGCAGGGGACAGTTGCAGAAGTTAGCCTCTGAAAGGAATTT
GTTTATTTTCATGCAAGTCTAGCCATGATAGGTGTTTAGAGAAAAGTTCTTCGTCATCTTCTCAGCCTGAACACAG
TGCCATGTTGGTCTCTACTGCAGCTTCTCCTTCACTGATTAAAGAAACCACCACTGGTTACTATAAAGACATAGT
AGAAAATATTTGCGGTAGAGAGAAAAGTGGAATTCAACCATTATGTCTGAGAGGTCCCATATTTTCAGATCAATC
GCCTCTCTCCAGTAAAGGAAAGCACTAGAAGAGTCTGAGAGCTCACAATAATTTCTCCGCCACTTGCCCAGGC
AATCAGAGATTATGTCAATTCTCTGTTGGTCCAGGGTGGGGTAGGTAGTTTGCTGGAACCTTCTAAGTCTATGCC
CCCCTGATGTAGAAAACATACAGAAGAGAATTGATCAGTCTAAGTTTCAAGAAAAGTGAATTCCTGTCTCCTCC
AAGAAAAGTCCCTAGACTGAGTGAGAAGTCACTGGAGGAAAGGGATTGAGGTTTCTTTGTGGCATTTCAGAACAT
ACCTGGATCCGAACTGATGTCTTCTTTTGCCAAAAGTGTGTCTCTCATTCACTCACTACCTTAGGTCTAGAAGT
GGCTAAGCAATCAGCATGATAAAATAGATGCCTCAGAACTATCTTTTCCCTTCCATGAATCTATTTTAAAGT
AATTGAAGAAGAATGGCAGCAAGTTGACAGGCAGCTGCCTTCACTGGCATGCAAAATATCCAGTTTCTTCCAGGGA
GGCAACACAGATATTATCAGTTCCAAAAGTAGATGATGAAATCCTAGGGTTTATTTCTGAAGCCACTCCACTAGG
AGGTATTCAAGCAGCCTCCACTGAGTCTTGCAATCAGCAGTTGGACTTAGCACTCTGTAGAGCATATGAAGCTGC
AGCATCAGCATTGCAGATTGCAACTCACACTGCCTTTGTAGCTAAGGCTATGCAGGCAGACATTAGTGAAGCTGC
ACAGATTCTTAGCTCAGATCCTAGTCTGACCCACCAAGCGCTTGGGATTCTGAGCAAAACATATGATGCAGCCTC
ATATATTTGTGAAGCTGCATTTGATGAAGTGAAGATGGCTGCCCATACCATGGGAAATGCCACTGTAGGTCGTCTG
ATACCTCTGGCTGAAGGATTGCAAAATTAATTTAGCTTCTAAGAATAAGCTGGCTTCCACTCCCTTTAAAGGTGG
AACATTATTTGGAGGAGAAGTATGCAAAGTAATTAAGAAAGCGTGAAATAAACACTAGTAAATTAAGGACAAAA
AGACATCTATCTTATCTTTCAGGTACTTTATGCCAACATTTTCTTTCTGTAAAGTTGTTTTAGTTTCCAGATA
GGGCTAATTACAAAATGTTAAGCTTCTACCCATCAAATTACAGTATAAAAGTAATTGCCTGTGTAGAACTACTTG
TCTTTTCTAAAGATTGCGTAGATAGGAAGCCTGGTACAAACAATTTAACGCTTCTAGATCACATATTAGTCTC
TAAGTTGTTTTCTGTTTCTGCTTTACTTATGTTTTTACAATTCTCCAAAAGTAAAGAAATTCTAATTAGGATAT
AAGGAGTATTTACTGTTCAATAGAAATAATATGCATCCTCCTTTATACCTAGGACAGAAATTAACATTTGTTACAC
ATTCAGAACAGTGATGTTGTTCTTTTGTACTTTTATCTCAGTATCTTTTACGTTCCATAACTTGTCCATATT
TTTGCTCATATTTCTTACTTTTCTTTGTTATTTATTCATGTCTGCAACATCAATCATAGTAGTCTAGATCAATG
CAACTCAAAGCACCAGTCTACAACTGTTACTTATCCACAGGCAAGATAAGCATGCACAAGAAATTTAAATCTAGA
GATACTTTTTAGGTCAATGACAGGATTTGATTTTTTAGCAAAATTTTATTAATAGCTAAAGCAATGTATTGATTT
ACACTCTGATGCAAGTAATTTATCTCTTCATTGACTGGTAGCAACCAATTCATGGACCAGTACCATGGACCACAC
TTTGAGAAACACTTCTTTGGATAATAATAGATATCCTGGGATAGTGCATGTTTACCATCTATTTTGTCTAGATAAT
GGGGCCTTTTAAAAAATAACTTTGCTTTTCATGATATATTGTATTTTGTGGAAAGTTAAGTTTAGCAATATAGA
CTCTAAAAGCAAAATTAATTTTTTAAAGCCATAAGAAATTATACTATATCCCAGTATCTGTATGTCTGTATAAAG
CAGTGTATTATCATGTTTTTCACTTCTGTGATTGTAAGTTAAGAGTCTTAACTGCAGAGGTATTGTGGAAAGTAGT
AGCCTTAAGCATAATAAAATATGGTCTCTTGGGTACTCCCTCTGGCCATTACCACATTCTTAGATTATATGTGTC
CATCTTTGCAGCTTCTGAGAGTAATTTTATTTGTTGTCTTCTGAAATGTACATGTATACATGTACCTACTGAGT
GCTATGTGATTTTTTAAAAATGTATTACTGTAGAATGCTTCTGCAAAATCAATAAAGTTGTTAAATTTGAACAGTG
TTGTGTGGTCTCCAGAAACATGTTGTTCTGTGTGCTTTATCTTGGAGTTGCAACAAGTTAAATATTTGTATATG
AACACCCCTTTTCCATTTTCATCATTGAACTCACTTTGACATTTCACTGGTATAATTGAAATATTTCTGATTATG
GTATGGTTTTTCTTCTGTTTGGAGGACATGTTTTTATTGACTGTTGGAATCTAAATTTATAAGAGGAATTAATCT
GTAACCAGATACCTTATTCGTTTAAACGATTTCTATTCCACTACTAATGGTTTTTTTTTACTTTGTGCTTTCTAGT
TCTTAGATTCTGAGTTAAACAAAGCATAAAATAGATTTTATATTGCTGGGGGTTGTACCAACATAGATACATTGA
CAGATCCATTGATAGAAGTGTGGGAGATGGACTTGAAATCTTAGTCCATAAATAAGACTGAACTGTTTAAACTA
ACTTGATAAAAATCACTGTTCTGTTTTTGGGAACCTGCAAGTATTAATAGATTCTGTACTAACTAGTATTAACAC
TGGAAGTTAGCAAGACACATATAGATGTCTTGACCCTTTTTCACACAAGTTCAGAGTTCATGTAAACTTTAG
AATTGACTTCTTTCTGTCTCTTCAGTAAGAAAGTAATCTAACTTAAATTTTTTGGTAGTAGAAGTTTTAGAAATA
ACAACTGACTAATTTTGTCTATACCATGATAAATGTCTACAAAAAGGGATTTTTTTTTTTTTTGAAGTGAAGTTTCG

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FIGURE 319B

CTCTTGTCCTCCAAAGCTGGAGTGCAATGGTGTGATCTCAGCTCGCTGCAACCTCCGCCTCCCAGGTTCAAGCAAT
TCTCCTGCCTTAGCCTCCTGAGTAGCTGGGATTACAGGTGTCTGCCACCAACCTGGGCTAATGTTTGTATTTTTTA
GTAGAGACGGGGTTTTACCATGTTGGCCAGGATGGTCTTAAGCTGACCTCAGGTGATCCGCCACCTCGGCCTTC
CAAAGTGCTGGGATTACAAGCGTGAGCCACCATGCCCTGCCAGGGATGTTAACTAAAATCAGTCTTTTCAAACC
TAGATCTTCAAATGATGATGAATTTAAGACTAGGAGACTGGAATATTGAAGCCTATTAAAAATACATATCCTTG
CGTTGTTAGGTTAATAACTATCATGGTGACAAGTGTATAAGTATTGGCTTCTTTTCAAAGAAATGTTATTTTTAT
TATAAGGACTGGGACGAGAAGTGACCTGTGATTGGTCGTATTTTTCTGTGAACAAGATTCTTCTTTACCTGAGT
TGTACCTAGGTTTTTTATAACTACATCAAAAAGCTTTTATATTGTACTTATTAATGTTATGGCAGTTACTTATA
GAAGCTTGGTACTATATGGATTTTTTTCATTTTTTAACTTTCCCTTCTATGTTCCAAATTTTAATTTAGTAAGTC
AACCTTTGCTGTACAGTAGTAGTATACTGTATGGACAAAACAATGGTAACAATTGTGTTATTTTAAATGGCCTTT
TTCCACATCTAAATTGTTCTTACTGAAAAGCTTTTCGTGGGAGCATTTTGAACCTCACTTCATGTTCAAAGCTATGA
GTCCCAGATAAAGGAAAGGAGAATAGGTAGGAAGAAGTGGTTGTCAGATGAAAGGGTAAGGGAGATAAGCAAAAA
TGGGATAAATAATGAAACAGTTTTCAAGACAAATTGCAGTTAAACAATTTTGGACTAGTGAGGTATTACCAGTAG
ACTTGTTTTTACCTTTTTAATGTGCCTAAAACCAGGGTTCCCGATTAATATTAGGATAACATCATCTTTATTGA
GTGTTTCAGAGAGTAATGGTTTTCTCCAATGTTATTTCCAGACTCTAAAATAGAGCTCAAGCTTGAGAAGAGAGAA
CCACTAAAGGGCAGAGCAAAGACTCCAGTAACACTCAAGCAAAAGAAGAGTTGAGCACAAATCAGGTATCTTTAGTT
TTATTACCACCGTGTACAGGTATAAATAACCTCCTGACAACACTAATCCATGTTTTAGCCTTTAATGGTTGACAC
CCAGATTCCAGCACGCTCAATAAACTTAATTCTGTTGTTAAATGATACTAAAAATCTAAACTTTGTGGGTTTTGT
CAGTAGTGTAGCCTGTGATTACAGCAAAAGCAAATTTTTAATGTCTCATTGTGTTTGAGTCTGTGCTAGATGTA
GTTCAAAGCCAGTTATATGGTGTTTTGAAAGAAATATTTTTAAAGGTGGAATATCTAGACACTTTTGATACAAT
TTCTTTAAAGGCAATGGAAGGGTTTTATATTTGTGTCTTTGTCTCTAGATTTCTGACTTTGATTTTTATGTTTGC
CTGTCTTGCTTTCTGCGATTCTTTCTAAACTCAGAAGCTAGTCTGGTCCTAAGACTACAGTTTTCTTTCTCTTAT
TTCAGATGAAAATTTACCTTTTTCTATTGTGGGAGAGGCGTTTCAGTTTTTCAAAGGGAAATGTAGGAAACTAAG
GAGAAAATAAGCATAGGTATAAATGAACAGAGAACAATTATTGACTAACCTAGTATTGTTTACAGAGAACAAT
TATTGACTAACCTAGTATTGTTTACAGAGAACAATTATTGACTAACCTAGTATTGTTTACAGAGAACAATTAT
TGACTAATGCAGCATTGATTTGGCTGATGCTTTATAAGACAGCTATTCCTAGAGTCATTTTCTTACCCCTGCTA
TGTCTAGCTGGATGATTTGTCTAGTTGGTTATCTTTCCATCTCCTATTTGTCACTTTGTGTGTTGTTTGTGAC
GGAGTTTTGCTCTTGTACCCGGGCTGGAGTGCAGTGGCGTGATCCCATCTCATTGCAACCTCCACCCCTGCTGGG
CTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACATGCCACCACGCTCAGCTAATTTT
TGTATTTTTAGTAGAGACGGGGTTTACCCTGTTGGCCAGGCTGGTCTCAAACCTCCTGACCTCAGGTGATCCACC
TGCATTGGCCTCCGAAAGTGCTGGGATTACAGGTGTGAGCCACCGCGCCAGCCTGTTTGTCTGTTTTAAATCAA
ATCCTTAGAGGAATTATTCTTGATTCTTAAAGGCAAGTCAGTCTCTCTCTTCATTTGATGTAGTTGATAAGTTGA
ATTTCAGAACGATTTGTTAGAAATGAGCTTTGTGACAAGAACATACAGAGCATTGAATGAATGAAGACTTTGTTA
ACATAGAACCAAATACTGGAATACATGTTTTATTGCCCTTTTATGTAGTAGTCCTAACAAATAGCTTCAGGAGCA
TGCTGAAGAATAAGGAAATAGGCCGGGCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCGGAGGCGG
GCGGATCACCTGAGGTCCGGAGTTCGAGACGAGCCTGACCAACATGGAGAAACCCTGTCTCTACTAAAAATACAA
AATTAGCCAGGCATGGTGGTGCATGCCTGTAATCCTAGCTACTCCGGAGGCTGAGGCAGGAGAATCGCTTGAACC
TTGGAGGCGGAGGTTGCTGTGAGCCGAGATCGCGCCATTGCACTCTAGCCTGGGCAACAAGAGCGAAACTCTGTC
TCAAAAATAAATAAATAAATAAATAAATAAATAAAGATGGTCTAAGGGATAATTGAGTTGGAGGAATCTAAACTGA
GGAGCAGAATAAATAGTCAAAGGAGTGTAGGTTTAGATGACAGGCAGAATTAGACAGTGGCTTTATTGCAGAAAA
TTTTAAACATGTAGAAGAGTGGAGGGAAGAGTTTAAATGACCTCCAGTCATAGATGTGCCACAGTTGTGAGTGT
TTACCAGTTTGGTTTCATCACCCACACCCCTCCAGCTTTTTAAATTACTTTTTTTTTTTTTTTTTTTTGTAGACA
GAATCTCACTCTGTGCGCCAGGTTGGAGTGCAGTGGCACAATCTCGGCTCACTTGCAACCTCCGCCTCCTGGGTT
CAAGCAGTTCTCCTGCTTCAGCCTCCTGAGTAGCTGGGATTACAGTTCCCGCCACCATGCCAGCTAGTTTTTG
AATTC

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FIGURE 320A

GCCATTTCTCCTCTTGTGTTTTCACTCCGGATTCTCCATGTTGGACCCAACTGAGGAGCCCGGAGCTGCCGCTGG
GGGATCGGGGCCGGGGGCACCCGGGGGAGCCGCTGCCGGGGCCGCCGCCCTTTGTACAGGCCGCTCCCTTCCC
GGTCCGGGGAGGAAACGAGAGGGGGGATGTGAACAGCTGTGGAAGTCGGAGTCTCGGGAGCCGGAGCGGGCCCC
GCCCAGGCCCCCAGCCCAGCCCAGCCGCGCGCCCGCCCGTCTCCCGTCCAGCCAGCCGGGCCCCGCGGGATT
GTTAGATGGAACACGGCTCCATCATCACCCAGGCGCGGAGGGAAGACGCCCTGGTGTCTACCAAGCAAGGCCTGG
TCTCCAAGTCCTCTCCTAAGAAGCCTCGTGGACGTAACATCTTCAAGGCCCTTTTCTGCTGTTTTCGCGCCCAGC
ATGTTGGCCAGTCAAGTTCCCTCCACTGAGCTCGCTGCGTATAAGGAGGAAGCAAACACCATTGCTAAGTCGGATC
TGCTCCAGTGTCTCCAGTACCAGTTCTACCAGATCCCAGGGACCTGCCTGCTCCAGAGGTGACAGAGGAAGATC
AAGGAAGGATCTGTGTGGTCATTGACCTCGATGAAACCCTTGTGCATAGCTCCTTTAAGCCAATCAACAATGCTG
ACTTCATAGTGCCTATAGAGATTGAGGGGACCACTCACCAGGTGTATGTGCTCAAGAGGCCTTATGTGGATGAGT
TCCTGAGACGCATGGGGGAACCTTTGAATGTGTTCTCTTCACTGCCAGCCTGGCCAAGTATGCCGACCCCTGTGA
CAGACCTGCTGGACCGGTGTGGGGTGTTCGGGGCCCGCCTATTCCGTGAGTCTTGCGTGTTCACCAGGGCTGCT
ACGTCAAGGACCTCAGCCGCTGGGGAGGGACCTGAGAAAGACCCTCATCCTGGACAACCTCGCCTGCTTCTTACA
TATTCCACCCCGAGAATGCAGTGCCTGTGCAGTCTGGTTTGATGACATGGCAGACACTGAGTTGCTGAACCTGA
TCCCAATCTTTGAGGAGCTGAGCGGAGCAGAGGACGTCTACACCAGCCTTGGGGCAGCTGCGGGCCCCCTTAGCCT
GCCCTGCTTCCAAGCGACGGCCATCCCAGTAGGGGACTTTCCACACTGTGCCTTTACGATCAGCGTGACAGAGT
AGAAGCTGGAGTGCCTCACCACACGGCCCCGAAACAGCGGGAAGTAACTGGAAAGAGCTTTAGGACAGCTTAGAT
GCCGAGTGGGCGAATGCCAGACCAATGATACCCAGAGCTACCTGCCGCCAACTTGTGAGATGTGTGTTTGACTG
TGAGAGAGTGTGTGTTTGTGTGTGTGTTTTGCCATGAACGTGTGGCCCCAGTGTATAGTGTTCAGTGGGGGAGAA
GCTGAAAGACCAAGACTCTTCCCAAGTTAGCTTGTCTCCTCTCCTGTACCCCTAAGAGCCACTGAGTTGTGTAGG
GATGAARACTATTGAAGACTCCATTGCCAAACCATGGCCTTTCTCAGTGTGTAAGGCCTATGCCAAGGATAAA
GGAAGGGTATGCCTTTGGGTACTCCAGGCATACACCTTTCTGAAATCCTTCTCCAGCCAGCTGTGTCAGACAAAA
GATCACATTTCTGGGAAGATGAGAACTTGTTCAGACCAGCATCCAGTGGCCATCAGGTCTGTGCCCCAAAGG
CTATGCTTGCCTCCGGCTGAGTGCCTGGGATAGGCCTTTTCTATGTCTCCCCAAGGCTGGGGTGCTGAGCCTGCC
TTCCTCACCACCTAGCCATAGTCTCAAACCTGTGGGGAAGGAGGTTTTCTCCCTGCCCGGGAAGAGGACAGATAA
CTGATTTCCGTTCTTTTGACTGTGTTTTAAATTTCTTTCTAAACACAGAGTGTGCGCCTGGTTTGTGTTCTGA
CAAAGTTACAGTCTTGGGCCTGTAATGAATGTGCGCGGCGCTGGGGTTGCAGGGAAAAGACAAATCCTCAAAGCG
TGGACGTGTGTCCCCATGGCTTGTGGATCAGCTAAGCTCGGGATCATTTCCATAAGTCTGCTTTTCAGGGATTCT
CTGCTGGTGTGTTGCAAGGACTTCTGTTCCAAAGGCTGGGAAAACTAAGCTGTCCCAGCCCCCTCCCATTTCTT
GGGCAGGGCTCTTTTCTGTGTGTTCTCCCCAGGGCCTGTCTGTACCGAGCTCTGTCTGTTCCAGCCTACAT
CCTTCTGGGTGTTGCTTTTCTCTTAAGGGCCTCAGAACTCTTGCTCTTCTCTGGGGTGAGGGGGGAATGAGTGT
CTTGACATGTGACAGCCTAATGCGCATGCTTTCTGCCTCTGGTAACAGGAGTGAGTGAGCCCCCTCAGACCTGCAC
TCTGGGTGTCTCTGCTTACAAAGGTTCTTAATAGTGAATGCTTTAAATTAAGTCAACGAAATGGAAGTTT
TCCCAGGGTGGAAAATAAGAGGAAGTGCTGCTGTAATTGGGAGCACAAAGGGGCTCCCAAAAAGGAGCCCCACCT
CAGCATCACTGCCTTAATCGTGGCCTCCCTGGGGTGGGTGGGGTTCTCTCCTCCCTCCCTCCCTCCTCTGGGGT
GGGAGGGCGCTCCTGTTCCCATCTCTGTGTTCCCTGGAGGCAGGTATCACAAAGCATTGTGAAATTGCTTTAGGT
GCAGGGACACCACCACTCAGGACTCTTCCCCATCATCCCTTCCATTGCCACACCCTAGATCCAGCCTCAGGAAC
TAACAAGTTKTGAGAAAAGCAGGTGGTAGAGCAGCAGCTTCGTGCTCTCAGCGGTGGCTGGCTGGCATTTTTCTC
TAGCGTTGTGGTGCCACCTTCCCTTCTTGTTCCCAAGGTTATAAGGCCTTGCTTTTCTCTTTGGAATCATAAAGTG
GAACAGAGTCCCCAGAACTCATGTGGHCATTTCCGACAGCATCACTCCCCGGTGCCATATGGGGTCCCGGTGTACC
TAAAGGGAGAAGGACCCCATGTGCTAGCCAGAAATATACTGTCTCTTGAAGGAAAGCAGGAGCTCAGACTCTTAG
AGCCAGCTGTGGCTTCGGACCCAAAGGCCTGACCTAGGCTGCTATCCTAATATTGGAGGAGGGGCTCTCTTCCAA
GCCCCACCCTAAGGGTTAGCCCTTGACAAATCTTGTCGCTCTAGGCCAGCCAGGCTTTTCTGACTAAATAAG
CAATAAGAGGCTCTAAGCTGACTGAGTTGCAAGGACCCTTTCCGCCCTCCCTTGGAATCTCCATGTTTCTCCAGAT
GGCGGAAGAGCATGTGCCACCCCTTTCTTAACAGACTTGTCCAAGTGCTTGGCGTGGGACCCATGACCAAAGCC
CAGGATGGCTTGGTGGGAGTGTCCCTGCTGCATCTGCATGAAGCCCCTGCTTTTTAGGCCTCACTCCCATCAGAA
CCCTGCTGCCCACCTGCAACTCCCCCAACAATGCCATTCCCCTTGGCCAGAGAAGCTACTCGGCCAAACC
TAGCCAGGGTCTGTTCTTGTGGACCAGAGCCAGCCTAGTCATTATTTGCTGTGCGGGTTCCAGTTTCACCGTGTG

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FIGURE 320B

TTAGGGTGAGGGATGATTGTAAAATTTGCTCCTCAAAGGAATCAGGCCAGACTCAATTTTGGGAGGGCAAGACAG
GGAGGAGGCCGCTTCATCCCAGACTCTCTTCTAGGGCTTCCCACCATCAGCCCCCTCCCACTTGAGACTGGTCTTT
GGGAGGCAATAGGCCACCATGCCTGGTCAGCACCAATTCAAGCCATGCCAGGAATCTGCCTACCTGCCAGGTTCA
GTTCTTTTAAGGTGCCTCTTCAGGGACACAGTGTGTCTCTCTGATTGGGCTTCTAAATCAAAGCCTGATGTTTCG
TGTCCCTCTCATAGGGGGAGCTTTGGACACAGGACCAGTTTGAAAAGGGTCAGGTAAGGGTTTCCACTCTGCAC
ATTGTAGAGGGAACACTCTGTAGGCCCATGGGTCCCTTACTAGAGAGGTTGAGTGAATTTGCCTTCAGTTAACAT
GGGACCTTCTGTTTAGCTTCCCTCTTGCTTCCCAAAGATTTTAAGCATTTTGTAAATGTATAAACTCACCTCTGGT
AACAGTGGCCCAGACGCTGCTTTGTGCTAAAAGCATGGGAAATGTAAAGGCAGTCTTCTCTGGGAAATGGATGC
TATTCTATTCTGCTGCCCCCTACCTGTTCCCTGAGGCCTCATTTAGAAAGAAAATCCCCTCAGAAGGCTGTCTGGCA
CCCAGTGTCTAGCCAGGCCAAGTATATGAGAAAGGTAAGTCCATTTTCCCCTTCAGGTCCTCAGTGGATTACTT
AACCCTGCTGTCCCTCGGTCCCTTTTTCTAAACGGGTTTAGTTCTGTCTTTTTTCTCCTTTTTTCTAAATGCT
GGTAAATATTTACATTCAGCCAGGGAAGAGGAGGCCAGAGGTCGGGCCAGCTGCCCCATTCTTTTAACGTTGTAG
GGCCTGCCCATGGAGCGGACCCCTCCTCTTTGGGCCTCGTGAGCTTTTTTGCTTATCATGTTCCATTTCTGCGCGC
TTTTCCCCCTTCAAGATGCCATTTGGAGGGTAGGGGATCTGCTTCCCACTGTGACTGGGCTATGGGATTCTGACTA
CCTTGCTTACAGATTCATGGTTTGATAAATTTGTTGTATTCCAAAACCTTGAAATGCAGGACGCCATTAAGTGTCT
GTTTATATTTTTTGAATATTTGTATTACTTACAATTAATTAATAAAAGTGGGTTTAAAAAACCTTTCCAGGAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 321

MEHGSIIITQARREDALVLTKQGLVSKSSPKKPRGRNIFKALFCCFRAQHVQSSSSTELAAYKEEANTIAKSDLL
QCLQYQFYQIPGTCLLPEVTEEDQGRICVVIDLDETLVHSSFKPINNADFIVPIEIEGTTHQVYVLKRPYVDEFL
RRMGELFECVLFTASLAKYADPVTDLLDRCGVFRARLFRESCV FHQGCYVKDLSRLGRDLRKTILDN SPASYIF
HPENAVPVQSWFDDMADTELLNLIPIFEELSGAEDVYTSLGAAAGPLACPASKRRPSQ

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FIGURE 322

CGTCTGGTTCAGGGGCTAGAAAAGAGCGTCGATGCCGGCGGCAGTGATGAGTCCTAGGAGGCGCTGGCTCTTTGG
CGGCTCGGAGGAGCGGCTGCTGCTGCTGCTGCTGCTGGTGGCCCCCTTTGCAGATGTATTGCTGTCCTTGAAT
ATTAGCCCATTTGAAAACGCCTGGGAAGTTCAGCCATCAGTATGTCCAAGTACAACTTATTATGTTAAGACATG
GAGAGGGTGCTTGGAATAAGGAGAACCGTTTTTGTAGCTGGGTGGATCAGAACTCAACAGCGAAGGAATGGAGG
AAGTCGGAAGTGTGGGAAGCAACTCAAAGCGTTAACTTTGAGTTTGATCTTGATTACATCTGTCCTTAATC
GGTCCATTACACACAGCCTGGCTGATCCTGGAAGAGCTAGGCCAGGAATGGGTGCCTGTGGAAAGCTCCTGGCGTC
TAAATGAGCGTCACTATGGGGCCTTGATCGGTCTCAACAGGGAGCAGATGGCTTTGAATCATGGTGAAGAACAAG
TGAGGCTCTGGAGAAGAAGCTACAATGTAAACCCCGCCTCCATTGAGGAGTCTCATCCTTACTACCAAGAAATCT
ACAACGACCGGAGGTATAAAGTATGCGATGTGCCCTTGATCAACTGCCACGGTCGGAAAGCTTAAAGGATGTTT
TGGAGAGACTCCTTCCCTATTGGAATGAAAGGATTGCTCCCGAAGTATTACGTGGCAAAACCATTCTGATATCTG
CTCATGGAAATAGCAGTAGGGCACTCCTAAAAACACCTGGAAGGTATCTCAGATGAAGACATCATCAACATTACTC
TTCCTACTGGAGTCCCCATTCTTCTGGAATTGGATGAAAACCTGCGTGCTGTTGGGCCTCATCAGTTCCCTGGGTG
ACCAAGAGGCGATCCAAGCAGCCATTAAGAAAAGTAGAAGATCAAGGAAAAGTGAAACAAGCTAAAAAATAGTCTT
TCTCAACTGTTGGCTAAGAAGAAATGCAAAAGAAGTGGCATAGGAGTGTGTTATGGGTGCTGAACTCTCTCTCTT
TTTCCCCGATTTTCCAGAGCTAGGCTGTGGAGTAGAGTTTGTATAGGTAAGTGGTAAGTAACTTATTGTGGCCAGAT
AAGGCTTTAGGATGCCTCAGTGCTTATGTCATAGCCTTATGAGTTAGCTTTCTTGCTAGCCCCCTAGTCGGTCAC
CAAAGTAGTAAGTGTGGGCTTAATGAAGGTCATAAGTTTCTGAGATGGGAGAGCAACAAGTAGAGATGAAGTT
AAAGGTATTTATCATTCAAGAAATCATTATTGAGTCACCATTGACAGGCACTATTCTAATCAGTAGTTCACTTTA
ATATTTAATAAGATTTTCTGGGATAACAGTAAGGGATATTAGATAATATACCGTATGTATTTATTACTAGTCTTT
TCCTCTAGGAAAAGGGATACTTTGATAATTAAGGCCAGAGGCCCATTAGTTGAGAAAGTCACAGATATATTTCTC
CAAGAAAGCCAACAACCACCACCACAATGACAGAAATGACAACAAGGCCCTTTAACTTGTCTTCTAGTTTAGAGA
CATCCTTCATTTGACATTTAGTAGAATTCCTCTTTGGCCACAAGAATAAGCAGCAAATAAACAACATATGGCTGTT
GAGGTTCTCATTTTGGTTTGTTTTAATTTTTTGAACCTTGGGTACCTGTAATTAGTTTAAAAATAAAGTTCCTGA
TAATAAAGTGACTGAAAATGGCAAAAAAAAAAAAAAAAAA

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FIGURE 323

MSKYKLIMLRHGEGAWNKENRFC SWVDQKLNSEGMEEARNCGQKALKALNFEFDLVFTSVLNRSIHTAWLILEELG
QEWVPVLESSWRLNERHYGALIGLNREQMALNHGEEQVRLWRRSYNVTPPP IEE SHPY YQE IYNDRRYKVC DVPLD
QLPRSESLKDVLERLLPYWNERIAPEVLRGKTILISAHGNSSRALLKHLEGISDEDIINITLPTGVPILLELDEN
LRVGP HQFLGDQEAIQA AIKKVEDQGKVKQAKK

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FIGURE 324A

GGCGCGGGCGGCCTGGAGCCCCGGGAGCGGCGCGCGCGGTCCCCGGCCCAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCGCCACCTGCAGTAGCGTTTCGCCCCGAACATGSCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTTCTATTACCCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCGGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCCC
TGCAGCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCCAATCAGATGGTGGTGCAGTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGCCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAATAATTCAAGAAAATTTAGACAAGTTAACTTTGGCTTGGGAAATAGGA
GTGAAGCTGTTATCGCCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTGCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTCGGGCAGCTGATCTCC
TCCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCCACCCCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTAGGAACATGTCAAGTCCTTTTCTTGGGGAATTGATCCCTATGACA
AACCATAATACCATCTACATTGAACGACACGAACCCCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCA
TGAGAGCAGCCAGTTTGTACACAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTCAGCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCCAGGAGGGGCGCGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCAGGGCTGTTCCCTTCATCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAGAATGCCATCCTGTCCAAGGAGTCGGCTCCAGGCCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACTTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCAGGGCATGGAAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTCTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTACCATCTTTGGCTCGAACAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTTCAC
CATCTGATGAGCGGGGAATGAGTGTTTGTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCACAT
GCTTCAATGGAGAGGACTTTGACAGGCCGCTGGTCTGTGTTCAACTGCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTTCAAGATGAGTGAAGATTTGTCTATTAGAGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCTCCTGTGCCTTGCCCTGTGGTCTTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGCGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCCTCTCA
CCGGGCTACGGGCAGCAGTGCCCTGGACTTTGACTATGAGCACAACCTGTTTGTATTGGTCCGACCTGGCCTTGG
ACGTCATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCTCTGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCATACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTTCAGTGGCCAGCAGCGCTCTGTCAATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTTCACAGCTCAGCATATTCC
GAGCTTCAAATACAGTGGGTCCCAGATGGAGATTCTGGCAAACCAGCTCACGGGGCTCATGGACATGAAGATT
TCTACAAGGGGAAGAACACTGGAAGCAATGCCTGTGTGCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGAACCAGTATCGCT
GCAGCAACGGGAACGTGATCAACAGCAATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGTATCCCAGTGT
CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA

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FIGURE 324B

GTGACGAGTACAACCTGCAGTTCCGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCTACTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACCTCCAGTGCCGAAACGGGC
ACTGCATCCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCAAACGGCACTTGATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCTGTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGAGGATGCTCCCAAGATCCTGAGTTCCACAAGGTATGTGATGAGTTCCGGTTTCCAGTGTCAGAATG
GAGTGTGCATCAGTTTGATTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCTACTGCG
AAAACCCACAGAAGCCCCAACTGCTCCCGCTACTTCCAGTTTCGGTGTGAGAATGGCCACTGCATCCCCAACA
GATGGAATGTGACAGGGAGAAGCACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTCACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCTTGCTTGCAAACGTCA
CTGCTGCCCTCCACTCCCACCAACTTGGGCGATGTGACCGATTTGAGTTTGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGATGAGCAGGGAGTTCCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCTGGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAATGCCCTCTGCTT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAAGTCTTGAACAGATACCACGTATCAGGTTAAAGTACAGGTTTCAAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCTGAGGACCCAGAGGGATTGCCAGATGCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCAGAGGGCTGCTAGTAACCTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAGGAAAAGTGATCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTACCCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTTGACACCCACAAGCAAGAGAGGAGAACTTTGAACCTCCGAGGAAGCATATTGTACACAAAGTTGGCAATC
TGACAGCTCATACTCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTGAGC
ATGTTATGACCAGAGGGGTTGCGCCACCTGCACCTAGCCTCAAGGCCAAAGCCATCAACCAGACTGCAGTGGAAT
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCATTGTGAGTAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGCAGGCTTCCAC
CCCGTCACCTGCATGTGGTTTCATACGGGCAAAACCTCCGTGGTTCATCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAATCCC
GTAACAGCACTGTGGAATACACCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACCTGGGGA
ACATGAGCAAAGATTCCAGCATAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAATGAAAGCAGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAATTT
CCAACCTGAAGATGGGTGATAATTACACGTTACCGTCCAAGCAAGATGCCTTTTGGCAACCAGATCTGTGGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGGCCATCTTATTCCTGATACTGCTGAGCCTGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCTATGATAACTGGATTTTTCAGATGACGTCC
CCATGGTGATAGCCTGAAAGAGCTTTCTCTACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAAGATAGTT
GATGGTTTATTTTAAAGATGCACCTTGAGTTGCAATATGTTATTTTTATATGGGCCAAAAACAAAAACAAAAA
AAAAAA

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FIGURE 325

MATRSSRRESRLPFLFTLVALLPFGALCEVWTQRLHGGSAPLPQDRGFLVVQGDPRELRLWARGDARGASRADEK
PLRRKRSAAALQPEPIKVYGOVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARPSSDVYVSYDYGKSFKKISD
KLNFGLGNRSEAVIAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGF SIPFRAADLLLHASKASNLLGLGDRS
HPNKQLWKSDDFGQTWIMI QEHVKSFSW GIDPYDKPNTIYIERHEPSGYSTVFRSTDFQSRNQEVILEEVRDF
QLRDKYMFATKVVHLLGSEQQSSVQLWVSFGRKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNNRNTLYIS
EAEGLKFSLSLENVLYYSPGGAGSDTLVRYFANEFPADFHRVEGLQGVYIATLINGSMNEENMRSVITFDKGGTW
EFLQAPAFGTGYGEKINCELSQGC SLHLAQRSLQLLNQLRRMPILSKESAPGLI IATG SVGKNLASKT NVYISS
AGARWREALPGPHYTWGDHGGIITAI AQMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTFEGEKSTVFTIF
GSNKENVHSWLILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVSN
SCTREDYECDFGFKMSEDLSLEVCPDPEFSGKSYSPVPCPVGSTYRRTRGYRKISGDTCSGGDVEARLEGELV
PCPLAEENEFILYAVRKSIIYRYDLASGATEQLPLTGLRAAVALDFDYEHNC LYWSD LALDVIQRLCLNGSTGQEV
I INSGLETVEALAFEPLSQLLYVWDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGVMFWDWGD LKP
GIYRSNMDGSAAYHLVSEDVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHPYAIAVFKNEIYW
DDWSQLSIFRASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSLLC LPKANNRSRSCPCPEDVSSSV
LP SGDL MCD CPQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDND CGDMSDERNCPTTICDLDTQFRC
QESGTCIPLSYKCDLEDDCGDNSDESHCEMHQCRSDEYNCSSGMCIRSSWVCDGDND CRDWSDEANCTAIYHTCE
ASNFQCRNGHCIPQRWACDGD TDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLC
THFMD FVCKNRQQCLFHS MVCDGIIQCRDGSDEDAFAFAGCSQDPEFHKVCDEF GFGQCQNGVCISLIWKCDGMDDC
GDYSDEANCENPTEAPNCSRYFQFRCENGHCIPNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYR
CSSGTCVMDTWVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRC DGHQDCQDG
RDEANCP THSTLT CMSREFQCEDEGEACIVLSERCDFGLDCSDESDEKACSDELTVYKVQNLQWTADFSGDVTLTW
MRPKKMP SASC VYNVYYRVVGESIWKTLETHSNKTNTVLKVLKPD TTYQVKVQVQCLSKAHNTNDFVTLRTPEGL
PDAPRNQLSLPREAEGVIVGHWAPP IHTHGLIREYIVEYSRSGSKMWASQRAASNFT EIKNLLVNTLYTVRVAA
VTSRGIGNWSDSKSITTIGKVIPPPDIHDSYGENYLSFTLT MESDIKVNGYV VNLFWAFDTHKQERRTLNFRG
SILSHKVGNLTAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKAINQTAVECTWTGPRNVVYGIFYA
TSFLDLYRNPKSLTTS LHNKTVIVSKDEQYLF LVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVHTGKTSVVI
KWESPYDSPDQDLLYAI AVKDLIRKTDRSYKVKS RNSTVEYTLNKLEPGG

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FIGURE 326A

CACGTTGGGTGACATAATGGGGTTTTTTTAATTATAGATTACACTGCATTTATTTCATCACCCCTGTCCTCTCAT
CCATAACTCAAATTTACTACCAGCAACACAAAATACAAAGATGTGTCCAGTTTCTACTACAGCTCTTCGCGTTTAC
AAGTGTCGAGCGCTTGCTTTTCGGAACGCCCTTGTGATTGGCCGAGCCAATGCCAGTGACATCAACCAACTTACTT
TTGATTGGAAGGCTGGTTGCTGGGACTGTAGCGTTTGCAGGAAGTCACTTAACTGTTTGGGAGCTGGAAAACCGA
AGCTGAAGTTCTCTTTTGCCATAGGAACGAGCGCAACTGACTAGGAAAGATGTGTCCAAAGCTCCGCAAGCTGG
AACGTGAGCCAGGAGGCCCGGACCGGCCACGGGACCGCGAGGCACTCCGAAAGTGTGCGGCTGCCCTTCCCTGC
CTCCCAGCTGTTACCCTTTTAAATGTCAGTGTTTCGAGGCTGTAGGGGTAGCACGAGGCAGCGAAAACGGAAACAGTC
GGATTGGCCGCACGCCTCAGTTCTAGACGCACCTCTCCACCGAAGCCGTTCTGACTGGCAGGGGGAGAAAAGTAAA
CAGAGTTGAATCACCTCCCCACTGGCCAATTGGAGGGGGTTTGGTTTGTGACGTGATGGGATTCTGCGAAATTG
TTACTGAGCAAGAGAATGCCGGAACGTGCGGACCGGCCGAGCAGGGGTTTCTAGAGCCGTCAGTGGACTCGGGAA
AAAGTGTCTCTTAGACCTGGCGCTCGGCGGGGCCCTCGCCACCCGCGTCGGGGTGATCGGGTGAATGTCCTGGGG
CTTGGGCTCGACGGCGAGGCGGCCGAGGGCGTGCACCTCTCTTGCAGTTTCTCTCCCAGCGCCTCGGGGGCGTT
TTCAGTCGAATAAATTGCGACCGCCACGTGTGGCATCTTTCCAAGGGAGCCGGCTCAGAGGGGCCGGCGCGCCC
GTCGGGGGATCGCGGCCGGCGCGGGGCAGGGGCGGCGGCTAGAGGCGGCGGCGCGGCGGAGCCCGGGGCCGTGGA
TGCTGCGTGCGGAGGCGCTGCGGTTACGTAAAGATGAGGGGCTGAGGTGCGCTCGGCGCTCTGCGAGTCGGAA
GCGCCCCGCGCCCCGCCCCCTTGGCCGCGCGCGCGTGCCTGGGCGGGCGGGTCTGCTCGTCCGAGGCCAGGGAGGGC
GAGCCGAACCTCCGAGCCACCGCCAAGTTTGTCCGCGCGCCTGGGCTGCCGTGCGCCGACCATGTCGCGGC
CGCTACATGGACTTCGTGGCTGCCAGTGTCTGGTTTCCATTTTGAACCGCGCTGCGGTGCCGGAGCATGGGGT
CGCTCCGGACGCCGAGCGGCTGCGACTACCTGAGCGCGAGGTGACCAAGGAGCACGGTGACCCGGGGGACACCTG
GAAGGATTACTGCACACTGGTCACCATCGCCAAGAGCTTGTGGACCTGAACAAGTACCGACCCATCCAGACCCC
CTCCGTGTGCAGCGACAGTCTGGAAGTCCAGATGAGGATATGGGATCCGACAGCGACGTGACCACCGAATCTGG
GTGAGTCCCTTCCCACAGCCCGGAGGAGAGACAGGATCCTGGCAGCGCGCCAGCCCGCTCTCCCTCCTCCATCC
TGGAGTGGCTGCGAAGGGGAAACACGCCTCCGAAAAGAGGCACAAGTGCCCTACAGTGGCTGTGGGAAAGTCTA
TGGAAAATCCTCCCATCTCAAAGCCCATTACAGAGTGCATACAGGTGAACGGCCCTTCCCCTGCACGTGGCCAGA
CTGCCTTAAAAAGTTCTCCCGCTCAGACGAGCTGACCCGCCACTACCGGACCCACACTGGGGAAAAGCAGTTCCG
CTGTCCGCTGTGTGAGAAGCGCTTCATGAGGAGTGACACCTCACAAAGCACGCCCGGCGGCACACCGAGTTCCA
CCCCAGCATGATCAAGCGATCGAAAAAGGCGCTGGCCAACGCTTTGTGAGGTGCTGCCCGTGGAAGCCAGGGAGG
GATGGACCCCGAAAGGACAAAAGTACTCCCAGGAAACAGACGCGTGAAAACTGAGCCCCAGAAGAGGCACACTTG
ACGGCACAGGAAGTCACTGCTCTTTGGTCAATATTCTGATTTTCTCTCCCTGCATTGTTTTTAAAAAGCACATT
GTAGCCTAAGATCAAAGTCAACAACACTCGGTCCCCTTGAAGAGGCAACTCTCTGAACCCGCTCTCTGACIGTTGG
AGGGAAGGCAAATGCTTTTGGGTTTTTTGGTTTTTTGTTTTTTTCTCCTTTTATTTTTTTGCGGGGGA
GGGTAGGGAGTGGGTGGGGGGGAGGGGGTAAGGCCAAGACTGGGTAGATTTTAAAGATTCAACACTGGTGTACAT
ATGTCCGCTGGGTGAGTTGACCTGTGGCCTCGCACAGTGATTCTAGGCCCTTTATGCTTGCTGTCTCTCAGAATT
GTTTTCTTACCTTTTAAATGTAATGACGAGTGTGCTTCAGTTTGTTTAGCAAAACCACTCTCTTGAATCACGTTAA
CTTTTGAGATTAAAAAAGCCATAGCACAGCTGTCTTTATGCAAGCAAGAGCACATCTACTCCAGCATGA
TCTGTCTATCTAAAGACTTGAAAACAAAAACAGTTACTTATAGTCAATGGGTAAGCAGAGTCTGAATTTATACTA
ATCAAGACAAACCTTTGAAAGGTTACACTAAGTACAGAACTTTTAAACCTTGCTTTGTATGAGTTGTACTTTTTG
AACATAAGCTGCACCTTTATTTTCTAATGCAGAGGATGAATAAGTTAAATACATGCTTTGAGGATAGAAGCAGAT
GTTCTGTTTGGCACCAGTTATAATCTGCTTATTTTACAATATACACGTTTCCCTAAGAAATCATGCGCAGAGAT
GTGAGGGCAGAATATACACAACAGATGCTGAAGGAGAAGGAGGGTAGTGTTTTGCAAAAGAAAAAGAAAGAACCC
AACAGAATTTTAACTCTATTAACCTTTTCCAAATTTTCCCTATGCTTTTAGTTAACATCATTATTGTATCCTAATGC
CACTAGGGGAGAGAGCTTTTGAATCTGTTGGGTTTTATTTGAATGTGTGCATAACAGTAATGAGATCTGGAAACA
CCTATTTTTTGGGGAAAAAGGTTTGGTTGGTCTCCTTCTGTGTTCTTACAAAACCTCCCACTCTCAGGTGCAAGAG
TTATGTAGAAGGAAAGGGAGCTGAAATAGGAACAGAAAATCAACCCCTATAACTAGTGAACACCAAGGGAAAAAT
ACCACAATGATTTAGAGGAGACTCTGCAAAATCGTCCCTTGTGGAGAATGCAGGCAACATGGAATACTACGAAT
GAAATCACATCACTGTATCTTTTACATCAATAGCCTCACCCTAATATATCTTGTATCTAGGTGTCTATAATGGC
TGAAACCACTACATCCATCTATGCCATTTACCTGAAAACCTTAACTGTGGCCTTTATGAGGCCAGAAAAGTGAAC
GAGTTTTGTAGTTAAGACCTCAAATGAGGGGAGTCAGCAGTGATCATGGGGGAAATGTTTACATTTTTTTTTTCT

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FIGURE 326B

TCAGAAGTAACGCTTTCTGATGATTTTATCTGATATTTAAAACAGGGAGCTATGGTGCACTCTAGTTTATACTTG
CGCTCTGAAATGTGTAAACATAGGGTGCCTACCTATTTACCTGACCCATACTCGTTTCTGATTCAGAATCAGTG
TGGGCTCCTGCAGTGGGCGCGGGTCACGGCTGACTCCAACCTCCAATACAACAGCCATCACTAGCACAGTGTTTT
TTTGTTTAACCAACGTAGTGTTATTAGTAGTTCTATAAAGAGAACTGCTTTTAACATTAGGGACTGGGAGCAGTC
CATGGGATAAAAAAGGAAAGTGTTTTCTCACGAGAAAACATGTCAGGAAAAATAAAGAACACTTTCTACCTCTGTT
TCAGATTTTTGAAACACTTATTTTAAACCAAATTTTAAATTTCTGTGTCCAAAAATAAGTTTTAAGGACATCTGTTC
TTCCATACGAAATAGGTTAGGCTGCCTATTTCTCACTGAGCTCATGGAATGGTTCTGCTTATGATACTCTGCACG
CTGCCTTTTAGTGAGTGAGGAGTTTGGGGTTGCCTAGCACTTGCTAACTTGTA AAAAGTCATCTTTCCCTCACAG
AAAGAAACGAAAGAAAGCAAAGCAAAGTCAGTGAAAGACAATCTTTATAGTTTCAGGAGTAAATCTAAATGTGGC
TTTTGTCAAGCACTTAGATGGATATAAATGCAGCAACTTGTTTTAAAAAAATGCACATTTACTTCCCAAAAAGT
TGTTACTTGCCTTTTCAAGTGTGACAAACTCACATTTGATATTCTCTTATATGTTATAGTAATGTAACGTATAAA
CTCAAGCCTTTTTATTCTTTGTGATTAAATCCTGTTTTAAATGTCACAAAACAGGAACCAGCATTCTAATTAGA
TTTACTATATCAAGATATGGTTCAAATAGGACTACTAGAGTTCATTGAACACTAAAACATATGAAACAATTACTTT
TTATATTAAAAAGACCATGGATTTAACTTATGAAAATCCAAATGCAGGATAGTAATTTTTGTTTACTTTTTTAAC
CAAACGAATTTTGAAAGACTATTGCAGGTGTTTTAAAAAGAAAGAAAAGTTGTTTTATCTAATACTGTAAGTAG
TTGTCATATTCTGGA AAAATTAATAGTTTTAGAGTTAAGATATCTCCTCTCTTTGGTTAGGGAAGAAGAAAGCCC
TTCACCATTGTGGAATGATGCCCTGGCTTTAAGGTTTAGCTCCACATCATGCTTCTCTT

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FIGURE 327

MSAAAYMDFVAAQCLVSI SNRAAVPEHGVAPDAERLRLPEREVTKEHGDPGDTWKDYCTLVTIAKSLLDLNKYRP
IQTPSVCSDSLESPDEDMGSDSDVTTESGSSPSHSPEERQDPGSAPSPLSLLHPGVAAGKHASEKRHKCPYSGC
GKVYGKSSHLKAHYRVHTGERPFPCTWPDCLKKFSRSDELTRHYRTHTG EKQFRCPLCEKRFMRSDHLTKHARRH
TEFHPSMIKRSKKALANAL

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FIGURE 328A

CACGTTGGGTGACATAATGGGGTTTTTTTAATTATAGATTACACTGCATTTATTTCATCACCCCTGTCTCTCAT
CCATAACTCAAATTTACTACCAGCAACACAAAATACAAAGATGTGTCCAGTTTCACTACAGCTCTTCGCGTTTAC
AAGTGTGAGCGCTTGCTTTTCGGAACGCCCTTGTGATTGGCCGAGCCAATGCCAGTGACATCAACCAACTTACTT
TTGATTGGAAGGCTGGTTGCTGGGACTGTAGCGTTTGCAGGAAGTCACTTAAGTGTGTTGGGAGCTGGAAAACCGA
AGCTGAAGTTCTTTTTGCCATAGGAACGAGCGCAACTGACTAGGAAAGATGTGTCCAAAGCTCCGCAAGCTGG
AACGTGAGCCAGGAGGCCCGGACCGGCCACGGGACCGCGAGGCACTCCGAAAGTGTGCGGCTGCCCTTCCCTGC
CTCCCAGCTGTTACCCTTTTAAATGTCAGTGTTCGAGGCTGTAGGGGTAGCACGAGGCAGCGAAACGGAAACAGTC
GGATTGGCCGCACGCCTCAGTTCTAGACGCACCTCTCCACCGAAGCCGTTCTGACTGGCAGGGGGAGAAAAGTAAA
CAGAGTTGAATCACCTCCCCACTGGCCAATTGGAGGGGGTTTGGTTTGTGACGTGATGGGATTCTGCGAAAATTG
TTACTGAGCAAGAGAATGCCGGAACGTGCGGACCGGCCGAGCAGGGGTTTCTAGAGCCGTCAGTGGACTCGGGAA
AAAGTGTCTCTTAGACCTGGCGCTCGGCGGGGCCCTCGCCACCCGCGTCGGGGTGATCGGGTGAATGTCCTGGGG
CTTTGGCTCGACGGCGAGGCGGCCGAGGGCGTGCACCTCTCTGACGTTTCTCTCCCAGCGCCTCGGGGGCGTT
TTCAGTCGAATAAACTTGCAGCCGCCACGTGTGGCATCTTTCCAAGGGAGCCGGCTCAGAGGGGCCGGCGCGCCC
GTCGGGGGATCGCGGCCGGCGCGGGGCAGGGGCGGCGGCTAGAGGCGGCGGCGCGGCGGAGCCCGGGGCCGTGGA
TGCTGCGTGCAGGCGCTGCCGTTACGTAAAGATGAGGGGCTGAGGTCGCTCGGCGCTCCTGCGAGTCGGAA
GCGCCCCGCGCCCCCGCCCCCTTGGCCGCGCGCCGTGCCGGGCGGGCGGGTCTGCTCCGAGGCCAGGGAGGGC
GAGCCGAACCTCCGACGCCACCGCCAAGTTTGTCCGCGCCGCTGGGCTGCCGTCGCCCGCACCATGTCCGCGGC
CGCTACATGGACTTCGTGGCTGCCAGTGTCTGGTTTCCATTTCGAACCGCGCTGCGGTGCCGAGCATGGGGT
CGCTCCGACGCCGAGCGGCTGCGACTACCTGAGCGCGAGGTGACCAAGGAGCACGGTGACCCGGGGACACCTG
GAAGGATTACTGCACACTGGTCACCATCGCCAAGAGCTTGTGGACCTGAACAAGTACCGACCCATCCAGACCCC
CTCCGTGTGCAGCGACAGTCTGGAAAGTCCAGATGAGGATATGGGATCCGACAGCGACGTGACCACCGAATCTGG
GTCGAGTCTTCCCACAGCCCGGAGGAGAGACAGGATCCTGGCAGCGCGCCAGCCGCTCTCCCTCCTCCATCC
TGGAGTGGCTGCGAAGGGGAAACACGCCTCCGAAAAGAGGCACAAGTGCCCTACAGTGGCTGTGGGAAAGTCTA
TGGAAAATCCTCCCATCTCAAAGCCCATTACAGAGTGCATACAGGTGAACGGCCCTTCCCCTGCAGTGGCCAGA
CTGCCTTAAAAAGTTCTCCCGCTCAGACGAGCTGACCCGCCACTACCGGACCCACACTGGGGAAAAGCAGTTCCG
CTGTCCGCTGTGTGAGAAGCGCTTCATGAGGAGTGACCACTCACAAAGCACGCCCCGGCGGCACACCGAGTTCCA
CCCCAGCATGATCAAGCGATCGAAAAGGCGCTGGCCAACGCTTTGTGAGGTGCTGCCCGTGGAAGCCAGGGAGG
GATGGACCCCGAAAGGACAAAAGTACTCCCAGGAAACAGACGCGTGAAAAGTGAAGCCGAGAGGCACACTTG
ACGGCACAGGAAGTCACTGCTCTTTGGTCAATATTCTGATTTTCTCTCCCTGCATTGTTTTTAAAGCACATT
GTAGCCTAAGATCAAAGTCAACAACACTCGGTCCCCTTGAAGAGGCAACTCTCTGAACCCGCTCTGACTGTTGG
AGGGAAGGCAAATGCTTTTGGGTTTTTTGGTTTTTTGGTTTTTTTCTCCTTTTATTTTTTGGCGGGGA
GGGTAGGGAGTGGGTGGGGGGGAGGGGTAAGGCCAAGACTGGGTAGATTTTAAAGATTCAACACTGGTGTACAT
ATGTCCGCTGGGTGAGTTGACCTGTGGCCTCGCACAGTGATTCTAGGCCCTTATGCTTGCTGTCTCTCAGAATT
GTTTTCTTACCTTTTAAATGTAATGACGAGTGTGCTTCAGTTTGTTTAGCAAAACCACTCTCTGAATCACGTTAA
CTTTTGAGATTAAAAAAGCCATAGCACAGCTGTCTTTATGCAAGCAAGAGCACATCTACTCCAGCATGA
TCTGTCTATAAGACTTGAAAACAAAAACAGTTACTTATAGTCAATGGGTAAGCAGAGTCTGAATTTATACTA
ATCAAGACAAACCTTTGAAAGGTTACACTAAGTACAGAACTTTTAAACCTTGCTTTGTATGAGTTGTACTTTTTG
AACATAAGCTGCACCTTTTATTTCTAATGCAGAGGATGAATAAGTTAAATACATGCTTTGAGGATAGAAGCAGAT
GTTCTGTTTGGCACCAGTTATAATCTGCTTATTTTACAATATACACGTTTCCCTAAGAAATCATGCGCAGAGAT
GTGAGGGCAGAATATACACAACAGATGCTGAAGGAGAAGGAGGGTAGTGTTTTGCAAAAGAAAAAGAAAGAACCC
AACAGAAATTTAACTCTATTAACCTTTCCAAATTTTCCATGCTTTTAGTTAACATCATTATTGTATCTTAATGC
CACTAGGGGAGAGAGCTTTTACTCTGTTGGGTTTTATTGTAATGTGTGCATAACAGTAATGAGATCTGGAAACA
CCTATTTTTTGGGGAAAAAGGTTTGTGGTCTCCTTCTGTGTTCTTACAAAACCTCCACTCTCAGGTGCAAGAG
TTATGTAGAAGGAAAGGGAGCTGAAATAGGAACAGAAAAATCAACCCCTATAACTAGTGAACACCAAGGGAAAT
ACCACAATGATTTTCAAGGAGACTCTGCAAAATCGTCCCTTGTGGAGAATGCAGGCAACATGGAATACTACGAAT
GAAATCACATCACTGTATCTTTTACATCAATAGCCTCACCCTAATATATCTTGTATCTAGGTGTCTATAATGGC
TGAAACCACTACATCCATCTATGCCATTTACCTGAAAACCTTAAGTGTGGCCTTTATGAGGCCAGAAAAGTGAAC
GAGTTTTGTAGTTAAGACCTCAAATGAGGGGAGTCAGCAGTGATCATGGGGGAAATGTTTACATTTTTTTTTTCT

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FIGURE 328B

TCAGAAGTAACGCTTTCTGATGATTTTATCTGATATTTAAAACAGGGAGCTATGGTGCACTCTAGTTTATACTTG
CGCTCTGAAATGTGTAAACATAGGGTGCCTACCTATTTACCTGACCCATACTCGTTTCTGATTTCAGAAATCAGTG
TGGGCTCCTGCAGTGGGCGCGGGTCACGGCTGACTCCAACCTCCAATACAACAGCCATCACTAGCACAGTGTTTT
TTTGTTTAACCAACGTAGTGTTATTAGTAGTTCTATAAAGAGAAGCTGCTTTTAACATTAGGGACTGGGAGCAGTC
CATGGGATAAAAAGGAAAGTGTTTTCTCACGAGAAAACATGTCAGGAAAAATAAAGAACACTTTCTACCTCTGTT
TCAGATTTTTGAAACACTTATTTTAAACCAAATTTTAATTTCTGTGTCCAAAATAAGTTTTAAGGACATCTGTTC
TTCCATACGAAATAGGTTAGGCTGCCTATTTCTCACTGAGCTCATGGAATGGTTCTGCTTATGATACTCTGCACG
CTGCCTTTTAGTGAGTGAGGAGTTTGGGGTTGCCTAGCACTTGCTAACTTGTA AAAAGTCATCTTTCCCTCACAG
AAAGAAACGAAAGAAAGCAAAGCAAAGTCAGTGAAAGACAATCTTTATAGTTTCAGGAGTAAATCTAAATGTGGC
TTTTGTCAAGCACTTAGATGGATATAAATGCAGCAACTTGTTTTAAAAAATGCACATTTACTTCCCCAAAAAGT
TGTTACTTGCCTTTTCAAGTGTGACAACTCACATTTGATATTCTCTTATATGTTATAGTAATGTAACGTATAAA
CTCAAGCCTTTTTATTCTTTGTGATTAAATCCTGTTTTAAATGTCAAAAACAGGAACCAGCATTCTAATTAGA
TTTACTATATCAAGATATGGTTCAAATAGGACTACTAGAGTTCATTGAACACTAAACTATGAAACAATTACTTT
TTATATTAAAAAGACCATGGATTTAACTTATGAAAATCCAAATGCAGGATAGTAATTTTTGTTTACTTTTTTAAC
CAAAGTGAATTTTTGAAAGACTATTGCAGGTGTTTTAAAAAGAAAGAAAGTTGTTTTATCTAATACTGTAAGTAG
TTGTCATATTCTGGAATAATTAATAGTTTTAGAGTTAAGATATCTCCTCTCTTTGGTTAGGGAAGAAGAAAGCCC
TTCACCATTTGTGGAATGATGCCCTGGCTTTAAGGTTTAGCTCCACATCATGCTTCTCTT

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FIGURE 329

MSAAAYMDFVAAQCLVSI SNRAAVPEHGVAPDAERLRLPEREVTKEHGDPGDTWKDYCTLVTIAKSLLDLNKYRP
IQTPSVCSDSLESPDEDMGSDSDVTTESGSSPSHSPEERQDPGSAPSPLSLLHPGVAAGKXHASEKRHKCPYSGC
GKVYGKSSHLKAHYRVHTGERPFPCTWPDCLKKFSRSEDLTRHYRTHTG EKQFRCPLCEKRFMRSDHLTKHARRH
TEFHPSMIKRSKKALANAL

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FIGURE 330

CACCGCGCAAGCGCATCCTGGCCTTTCTTCAGTCCCCACGTGCGATCCTTCCCGGCAACTTTTTTCGAGAAAAATG
CCCAAATTCAAGGCGGCCCCGTGGGGTGGGGGGTCAGGAAAAACATGCGCCCCCTGGCCGATCAGATCCTGGCTGGG
AATGCGGTGCGGGCGGGGGTCCGGGAGAAGCGGCGGGGTGCGGGACAGGAGAAGCGGAGGAAGAGTATGTGGGG
CCCCGGCTGAGCCGACGGATTTTGCAGCAAGCACGGCAGCAACAGGAGGAACTCGAGGCCGAGCATGGGACTGGG
GACAAGCCCCGCGGCGCCGCGGGAACGCACCACGCGGCTGGGTCCAAGAATGCCTCAGGATGGATCAGATGACGAG
GACGAGGAGTGGCCCCACCCTGGAGAAGGCTGCCACAATGACAGCAGCGGGCCATCATGCAGAGGTGGTTGTGGAC
CCTGAGGATGAGCGTGCCATAGAGATGTTCAATGAACAAGAACCCTCCTGCCAGGCGCACCCCTGGCTGACATCATC
ATGGAGAAGCTGACTGAGAAGCAGACAGAGGTTGAGACAGTCATGTGAGAGGTGTCGGGCTTCCCTATGCCCCAG
CTGGACCCCCGGGTCTAGAAGTGTACAGGGGGGTCCGGGAGGTATTATCTAAGTACCGCAGTGGAAGAACTGCC
AAGGCATTTAAGATCATCCCTGCACTCTCCAACCTGGGAGCAAATCCTCTACGTACAGAGCCGGAGGCCTGGACT
GCAGCTGCCATGTACCAGGCCACCAGGATTTTTGCGCTCTAACCTGAAGGAACGCATGGCCCAGCGCTTCTACAAC
CTTGCTCTGCTCCCTCGAGTACGAGATGACGTTGCTGAATACAAACGACTCAACTTCCATCTCTACATGGCTCTC
AAGAAGGCCCTTTTCAAACCTGGAGCCTGGTTTCAAAGGGATCCTGATTCCACTGTGCGAGTCTGGCACTTGTACC
CTCCGGGAAGCCATCATTTGTGGGTAGCATCATACCAAGTGCTCCATCCCTGTGTTGCACTCCAGTGCGGCCATG
CTGAAAATTGCTGAGATGGAATACAGCGGTGCCAACAGCATCTTCTGCGACTGCTGCTGGATAAGAAGTATGCA
CTGCCTTACCGGGTGCTGGATGCCCTAGTCTTCCACTTCTGCGGGTTCCGGACAGAGAAGCGTGAAGTGCCTGTG
CTGTGGCACCAGTGCTTCTGACTTTTGGTCCAGCGCTACAAGGCCGACTTGGCCACAGACCAGAAAGAGGCCCTC
TTAGAACTGCTCCGGCTGCAGCCCCATCCACAGCTATCGCCCGAAATCAGGCGTGAGCTTCAGAGTGCAGTCCCC
CGCGATGTGGAAGATGTTCCCATCACCGTGAGTAGGAGGAAAACAGTCAGCTGTCCTGGCCAAAGGGGTTTGAAG
GACACCAAGACCCCCGTTGGTGAAGATGACACTGAGCTTTAATGGCTGAAGACCCAGATCAGGGCAGTGAC
AGATCACAGGGACATCTGTGGCTCCCAGTCCAGGACAGGAAGGACTGAGGGTCTGGCTGGTTCCCTCTTCCATTC
TAGGCCCTTATCCCTGTTTGTGAGAGCCAACTTGAGATACCATATGCTAGCATTCCCAGTCCCCAGCTGGG
GCTTGGTGTGAGTACTTTTTCTATGGCTATTGTGTCAGGTCACTGTGGATAAAGGCAAAGACAGATATTTATTGA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 331

MNKNPPARRTLADIIMEKLTEKQTEVETVMSEVSGFPMPQLDPRVLEVYRGVREVLISKYRSGKLPKAFKIIPALS
NWEQILYVTEPEAWTAAAMYQATRIFASNLKERMAQRFYNLVLLPRVRDDVAEYKRLNFHLYMALKKALFKPGAW
FKGILIPLCESGTCTLREAIIVGSIITKCSIPVLHSSAAMLKIAEMEYSGANSIFLRLLLDKKYALPYRVLDALV
FHFILGFRTEKRELPVLWHQCLLTLVQRYKADLATDQKEALLELLRLQPHQLSPEIRRELQSAVPRDVEDVPITV
E

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FIGURE 332A

GTGCCCCCGTTACTTTTCTCTGCGAAATATGGCGCACGCTGGGAGAACAGGGTACGATAACCGGGAGATAGT
GATGAAGTACATCCATTATAAGCTGTGCGAGAGGGGCTACGAGTGGGATGCGGGAGATGTGGGCGCCGCGCCCC
GGGGGCGCCCCCGCGCCGGGCATCTTCTCTCGCAGCCCGGGCACACGCCCCATACAGCCGCATCCCGGGACCC
GGTCGCCAGGACCTCGCCGCTGCAGACCCCGGCTGCCCCCGCGCCGCGGGGCTGCGCTCAGCCCGGTGCC
ACCTGTGGTCCACCTGACCCTCCGCCAGGCCGGCGACGACTTCTCCCGCCGCTACCGCCGCGACTTCGCCGAGAT
GTCCAGGCAGCTGCACCTGACGCCCTTACCGCGCGGGGACGCTTTGCCACGGTGGTGGAGGAGCTCTTCAGGGA
CGGGGTGAAC TGGGGGAGGATTGTGGCCTTCTTTGAGTTTCGGTGGGGTTCATGTGTGTGGAGAGCGTCAACCGGGA
GATGTCGCCCCCTGGTGGACAACATCGCCCTGTGGATGACTGAGTACCTGAACCGGCACCTGCACACCTGGATCCA
GGATAACGGAGGCTGGGATGCCTTTGTGGAACGTACGGCCCCAGCATGCGGCCTCTGTTTGATTTCTCTGGCT
GTCTCTGAAGACTCTGCTCAGTTTGGCCCTGGTGGGAGCTTGCATCACCTGGGTGCCTATCTGGGCCACAAGTG
AAGTCAACATGCCCTGCCCCAAACAAATATGCAAAAGGTTCACTAAAGCAGTAGAAATAATATGCATTGTCTAGTGA
TGTTCCATGAAACAAAGCTGCAGGCTGTTTAAAGAAAAATAACACACATATAAACATCACACACACAGACAGACA
CACACACACACAACAATTAACAGTCTTCAGGCAAAACGTGCAATCAGCTATTTACTGCCAAAGGGAAATATCATT
TATTTTTTACATTATTAAGAAAAAAGATTTATTTATTTAAGACAGTCCCATCAAACCTCTGTCTTTGGAAATC
CGACCACTAATTGCCAAGCACCGCTTTCGTGTGGCTCCACCTGGATGTTCTGTGCCTGTAAACATAGATTTCGCTTT
CCATGTTGTTGGCCGGATCACCATCTGAAGAGCAGACGGATGGAAAAAGGACCTGATCATTGGGGAAGCTGGCTT
TCTGGCTGCTGGAGGCTGGGGAGAAGGTGTTTCACTTGCATTTCTTTGCCCTGGGGGCTGTGATATTAACAG
AGGGAGGGTTTCTGTGGGGGGAAGTCCATGCCTCCCTGGCCTGAAGAAGAGACTCTTGCATATGACTCACATGA
TGCATACCTGGTGGGAGGAAAAGAGTTGGGAACCTCAGATGGACCTAGTACCCACTGAGATTTCCACGCCGAAGG
ACAGCGATGGGAAAAATGCCCTTAAATCATAGGAAAGTATTTTTTTAAGCTACCAATTGTGCCGAGAAAAGCATT
TTAGCAATTTATACAATATCATCCAGTACCTTAAAGCCCTGATTGTGTATATTCATATATTTTGGATACGCACCCC
CCAACTCCCAATACTGGCTCTGTCTGAGTAAGAAACAGAATCCTCTGGAACCTTGAGGAAGTGAACATTTCCGGTGA
CTTCCGCATCAGGAAGGCTAGAGTTACCCAGAGCATCAGGCCGCCACAAGTGCTTGTAGGAGACCGAAGTC
CGCAGAACCTGCCTGTGTCCCAGCTTGGAGGCCTGGTCTGGAACCTGAGCCGGGGCCCTCACTGGCCTCCTCCAG
GGATGATCAACAGGGCAGTGTGGTCTCCGAATGTCTGGAAGCTGATGGAGCTCAGAATTCACCTGTCAAGAAAGA
GCAGTAGAGGGGTGTGGCTGGGCCTGTACCCTGGGGCCCTCCAGGTAGGCCCGTTTTCAGTGGAGCATGGGAG
CCACGACCCCTTCTTAAGACATGTATCACTGTAGAGGGAAGGAACAGAGGCCCTGGGGCCCTTCCATCAGAAGGAC
ATGGTGAAGGCTGGGAACGTGAGGAGAGGCAATGGCCACGGCCCATTTTGGCTGTAGCACATGGCACGTTGGCTG
TGTGGCCTTGGCCACCTGTGAGTTTAAAGCAAGGCTTTAAATGACTTTGGAGAGGGTCACAAATCCTAAAGAA
GCATTGAAGTGAGGTGTATGGATTAATTGACCCCTGTCTATGGAATTACATGTAACATTATCTTGTCACTGT
AGTTTGGTTTTATTTGAAAACCTGACAAAAAAAAGTTCCAGGTGTGGAATATGGGGGTATCTGTACATCCTGG
GGCATTAAAAAAAATCAATGGTGGGGAACATAAAGAAGTAACAAAAGAAGTGACATCTTCAGCAAATAAAT
AGGAAATTTTTTTTTCTTCCAGTTTGAATCAGCCTTGAAACATTGATGGAATACTCTGTGGCATTATTGCATT
ATATACCAATTTATCTGTATTAACCTTTGGAATGTACTCTGTTCAATGTTTAAATGCTGTGGTTGATATTTGAAAGC
TGCTTTAAAAAATAACATGCATCTCAGCGTTTTTTTGTGTTTAAATGATTTAGTTATGGCCTATACACTATTTG
TGAGCAAAGGTGATCGTTTTCTGTTTGAGATTTTTATCTCTTGATTCTTCAAAGCATTCTGAGAAGGTGAGATA
AGCCCTGAGTCTCAGCTACCTAAGAAAAACCTGGATGTCACCTGGCCACTGAGGAGCTTTGTTTCAACCAAGTCAT
GTGCATTTCCACGTCAACAGAATTGTTTATTGTGACAGTTATATCTGTTGTCCCTTTGACCTTGTCTTGAAGG
TTTCTCGTCCCTGGGCAATTCCGCATTTAATTCATGGTATTCAGGATTACATGCATGTTTGGTTAAACCCATGA
GATTCATTCAAGTTAAAAATCCAGATGGCAAATGACCAGCAGATTCAAATCTATGGTGGTTTGACCTTTAGAGAGT
TGCTTTACGTGGCCTGTTTCAACACAGACCCACCCAGAGCCCTCCTGCCCTCCTTCCGCGGGGGCTTTCTCATGG
CTGTCTTTCAGGGTCTTCTGAAATGCAGTGGTGTACGCTCCACCAAGAAAGCAGGAAACCTGTGGTATGAAG
CCAGACCTCCCCGGCGGGCCTCAGGGAACAGAAATGATCAGACCTTTGAATGATTCTAATTTTTAAGCAAAATATT
ATTTTATGAAAGGTTTACATTGTCAAAGTGATGAATATGGAATATCCAATCCTGTGCTGCTATCCTGCCAAAATC
ATTTTAAATGGAGTCAGTTTGCAGTATGCTCCACGTGGTAAGATCCTCCAAGCTGCTTTAGAAGTAACAATGAAGA
ACGTGGACGCTTTTAAATATAAAGCCTGTTTTGTCTTCTGTTGTTGTTCAAACGGGATTACAGAGTATTTGAAAA
ATGTATATATATTAAGAGGTCACGGGGGCTAATTGCTGGCTGGCTGCCTTTTGCTGTGGGGTTTTGTTACCTGGT
TTTAAACAGTAAATGTGCCAGCCTCTTGCCCCAGAAGTGTACAGTATTGTGGCTGCACTTGCTCTAAGAGT

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FIGURE 332B

AGTTGATGTTGCATTTTCCTTATTGTTAAAAACATGTTAGAAGCAATGAATGTATATAAAAGCCTCAACTAGTCA
TTTTTTCTCCTCTTCTTTTTTTTCATTATATCTAATTATTTTGCAGTTGGGCAACAGAGAACCATCCCTATTTT
GTATTGAAGAGGGATTACATCTGCATCTTAAGTCTCTTTATGAATGAAAAACAGTCTCTGTATGTACTCCT
CTTTACACTGGCCAGGGTCAGAGTTAAATAGAGTATATGCACCTTCCAAATTGGGGACAAGGGCTCTAAAAAAG
CCCCAAAAGGAGAAGAATCTGAGAACCTCCTCGGCCCTCCAGTCCCTCGCTGCACAAATACTCCGCAAGAGA
GGCCAGAATGACAGCTGACAGGGTCTATGGCCATCGGGTCGTCTCCGAAGATTTGGCAGGGGCAGAAACTCTGG
CAGGCTTAAGATTTGGAATAAAGTCACAGAATCAAGGAAGCACCTCAATTTAGTTCAAACAAGACGCCAACATTC
TCTCCACAGCTCACTTACCTCTCTGTGTTTCTAGATGTGGCCTTCCATTTATATGTGATCTTTGTTTTATTAGTAAA
TGCTTATCATCTAAAGATGTAGCTCTGGCCAGTGGGAAAAATTAGGAAGTGATTATAAATCGAGAGGAGTTATA
ATAATCAAGATTAATGTAAATAATCAGGGCAATCCCAACACATGTCTAGCTTTACCTCCAGGATCTATTGAGT
GAACAGAATTGCAAATAGTCTCTATTTGTAATTGAACCTTATCCTAAAACAAATAGTTTATAAATGTGAACCTAAA
CTCTAATTAATTCCAACTGTACTTTTAAAGGCAGTGGCTGTTTTTAGACTTTCTTATCACTTATAGTTAGTAATGT
ACACCTACTCTATCAGAGAAAAACAGGAAAGGCTCGAAATACAAGCCATTCTAAGGAAATTAGGGAGTCAGTTGA
AATTCATTCTGATCTTATTCTGTGGTGTCTTTTGCAGCCAGACAAATGTGGTTACACACTTTTTAAGAAATAC
AATTCATACATTGTCAAGCTTATGAAGGTTCCAATCAGATCTTTATTGTTATTCAATTTGGATCTTTCAGGGATTT
TTTTTTTAAATTATTATGGGACAAAGGACATTTGTTGGAGGGGTGGGAGGGAGGAACAATTTTTAAATATAAAAC
ATTCCCAAGTTTGGATCAGGGAGTTGGAAGTTTTCAGAATAACCAGAACTAAGGGTATGAAGGACCTGTATTGGG
GTCGATGTGATGCCTCTGCGAAGAACCTTGTGTGACAAATGAGAAACATTTTGAAGTTTGTGGTACGACCTTTAG
ATTCCAGAGACATCAGCATGGCTCAAAGTGCAGCTCCGTTTGGCAGTGCAATGGTATAAATTTCAAGCTGGATAT
GTCTAATGGGTATTTAAACAATAAATGTGCAGTTTAACTAACAGGATATTTAATGACAACCTTCTGGTTGGTAG
GGACATCTGTTTCTAAATGTTTATTATGTACAATACAGAAAAAAATTTTATAAAATTAAGCAATGTGAACTGAA
TTGGAGAGTGATAATACAAGTCCTTTAGTCTTACCCAGTGAATCATTCTGTTCCATGTCTTTGGACAACCATGAC
CTTGGACAATCATGAAATATGCATCTCACTGGATGCAAAGAAAAATCAGATGGAGCATGAATGGTACTGTACCGGT
TCATCTGGACTGCCCCAGAAAAATAACTTCAAGCAAACATCCTATCAACAACAAGGTTGTTCTGCATACCAAGCT
GAGCACAGAAGATGGGAACACTGGTGGAGGATGGAAAGGCTCGCTCAATCAAGAAAAATCTGAGACTATTAATAA
ATAAGACTGTAGTGTAGATACTGAGTAAATCCATGCACCTAAACCTTTTGGAAAAATCTGCCGTGGGCCCTCCAGA
TAGCTCATTTCATTAAGTTTTTCCCTCCAAGGTAGAATTTGCAAGAGTGACAGTGGATTGCATTTCTTTTGGGGA
AGCTTTCTTTTGGTGGTTTTGTTTTATTATACCTTCTTAAGTTTTCAACCAAGGTTTGCTTTTGTGTTTGAAGTTACT
GGGGTTATTTTGTTTTAAATAAAAAATAAGTGACAATAAGTGTTTTTGTATTGAAAGCTTTTGTATCAAGATT
TTCATACTTTTACCTTCCATGGCTCTTTTAAAGATTGATACTTTTAAAGAGGTGGCTGATATTCTGCAACACTGTA
CACATAAAAAATACGGTAAGGATACTTTACATGGTTAAGGTAAAGTAAGTCTCCAGTTGGCCACCATTAGCTATA
ATGGCACTTTGTTTGTGTTGTTGGAAAAAGTCACATTGCCATTAACTTTCTTGTCTGTCTAGTTAATATTGTG
AAGAAAAATAAAGTACAGTGTGAGATACTG

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FIGURE 333

MAHAGRTGYDNREIVMKYIHYKLSQRGYEWDA GDVGAAPPGAAPAGIFSSQPGHTPHPAASRDPVARTSPLQTP
AAPGAAAGPALSPVPPVVHLALRQAGDDFSRRYRGDFAEMSSQLHLTPFTARGREATVVEELFRDGVNWGRIVAF
FEFGGVMCVESVNREMSPLVDNIALWMTEYLNRLHTWIQDNGGWVGASGDVSLG

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FIGURE 334

GAGTGA CTCCACCGCCCGGAGCAGCGGTGCAGGACGCGCGTCTCCGCCGCCCGCGGTGACTTCTGCCTGCGCTCC
TTCTCTGAACGCTCACTTCCGAGGAGACGCCGACGATGAAGACACCGTGGAAGGTTCTTCTGGGACTGCTGGGTG
CTGCTGCGCTTGTACCATCATCACCGTGCCCGTGGTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACA
GTCGCAAACTTACACTCTAACTGATTACTTAAAAATACTTATAGACTGAAGTTATACTCCTTAAGATGGATTT
CAGATCATGAATATCTCTACAAACAAGAAAATAATATCTTGGTATTCAATGCTGAATATGGAAACAGCTCAGTTT
TCTTGGAGAACAGTACATTTGATGAGTTTGGACATTCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTA
TTCTCTTAGAATACAACACTACGTGAAGCAATGGAGGCATTCCCTACACAGCTTCATATGACATTTATGATTTAAATA
AAAGGCAGCTGATTACAGAAGAGAGGATTCCAAACAACACACAGTGGGTCACATGGTCACCAGTGGGTCATAAAT
TGGCATATGTTTGGAAACAATGACATTTATGTTAAAATTGAACCAAATTTACCAAGTTACAGAATCACATGGACGG
GGAAAGAAGATATAATATATAATGGAATAACTGACTGGGTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTC
TGTGGTGGTCTCCAAACGGCACTTTTTTAGCATATGCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACT
CCTTCTACTCTGATGAGTCACTGCAGTACCCAAAGACTGTACGGGTTCCATATCCAAAGGCAGGAGCTGTGAATC
CAACTGTAAAGTTCTTTGTTGTAAATACAGACTCTCTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTG
CTCCTGCTTCTATGTTGATAGGGGATCACTACTTGTGTGATGTGACATGGGCAACACAAGAAAAGATTTCTTTGC
AGTGGCTCAGGAGGATTGAGAACTATTCGGTCATGGATATTTGTGACTATGATGAATCCAGTGGGAAGATGGAACT
GCTTAGTGGCACGGCAACACATTGAAATGAGTACTACTGGCTGGGTTGGAAGATTTAGGCCCTTCAGAACCTCATT
TTACCCCTTGATGGTAATAGCTTCTACAAGATCATCAGCAATGAAGAAGGTACAGACACATTTGCTATTTCCAAA
TAGATAAAAAAGACTGCACATTTATTACAAAAGGCACCTGGGAAGTCATCGGGATAGAAGCTCTAACCACTGATT
ATCTATACTACATTAGTAATGAATATAAAGGAATGCCAGGAGGAAGGAATCTTTATAAAATCCAACTTAGTGACT
ATACAAAAGTGACATGCCTCAGTTGTGAGCTGAATCCGGAAAGGTGTGAGTACTATTCTGTGTCATTTCAGTAAAG
AGGCGAAGTATTATCAGCTGAGATGTTCCGGTCTGGTCTGCCCTCTATACTCTACACAGCAGCGTGAAATGATA
AAGGGCTGAGAGTCTTGAAGACAATTCAGCTTTGGATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAAC
TGGACTTCATTATTTTGAATGAAACAAAATTTTGGTATCAGATGATCTTGCCTCCTCATTTTGGATAAATCCAGA
AATATCTCTACTATTAGATGTGTATGCAGGCCCATGTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGG
CCACTTACCTTGCAAGCACAGAAAACATTATAGTAGCTAGCTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATA
AGATCATGCATGCAATCAACAGAAGACTGGGAACATTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAAATTTT
CAAAAATGGGATTTGTGGACAACAAACGAATTGCAATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGG
TCCTGGGATCGGGAAAGTGGCGTGTTCAGTGTGGAATAGCCGTGGCGCCTGTATCCCGGTGGGAGTACTATGACT
CAGTGACACAGAACGTTACATGGGTCTCCAACTCCAGAAGACAACCTTGACCATTACAGAAATTCAACAGTCA
TGAGCAGAGCTGAAAATTTTAAACAAGTTGAGTACCTCCTTATTCATGGAACAGCAGATGATAACGTTCACTTTC
AGCAGTCAGCTCAGATCTCCAAAGCCCTGGTTCGATGTTGGAGTGGATTCCAGGCAATGTGGTATACTGATGAAG
ACCATGGAATAGCTAGCAGCACAGCACACCAACATATATATACCCACATGAGCCACTTCATAAAACAATGTTTCT
CTTTACCTTAGCACCTCAAAATACCATGCCATTTAAAGCTTATTAAGCTCATTGTTTTGTTTTTATTATCTCAAAA
CTGCACTGTCAAGATGATGATGATCTTTAAATACACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAA
ATTTACATACCTATCATCTTAAGTAGGGACTTCTGTCTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATC
CGGTGGGTTTTTATTGTTTAAATCATTCTGTCATCAGCTGCTGAAACAACAAATAGGAATTGTTTTTATGGAGG
CTTTGCATAGATTCCCTGAGCAGGATTTTAACTTTTTCTAACTGGACTGGTTCAAATGTTGTTCTCTTTTAA
AGGGATGGCAAGATGTGGGCAGTGATGTCACTAGGGCAGGGACAGGATAAGAGGGATTAGGGAGAGAAGATAGCA
GGGCATGGCTGGGAACCCAAGTCCAAGCATACCAACACGAGCAGGCTACTGTGCTGCTCCCTCGGAGAAGAGCTG
TTCACAGCCAGACTGGCACAGTTTCTGAGAAAGACTATTCAAACAGTCTCAGGAAATCAAATATGCAAAGCACT
GACTTCTAAGTAAACCACAGCAGTTGAAAAGACTCCAAAGAAATGTAAGGGAACTGCCAGCAACGCAGGCCCC
CAGGTGCCAGTTATGGCTATAGGTGCTACAAAACACAGCAAGGGTGATGGGAAAGCATTGTAAATGTGCTTTTA
AAAAAAATACTGATGTTTCTAGTGAAAGAGGCAGCTTGAAACTGAGATGTGAACACATCAGCTTGCCCTGTTAA
AAGATGAAAATATTTGTATCAAAATCTTAACTTGAAGGAGTCTTGCATCAATTTTCTTATTTCATTTCTTTG
AGTGTCTTAATTAAGAATATTTTAACTTCCCTGGACTCATTTTAAAAAATGGAACATAAAATACAATGTTATG
TATTATTATCCATTCTACATACTATGGAATTTCTCCAGTCATTTAATAAATGTGCCTTCATTTTTTC

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FIGURE 335

MKTPWKVLLGLLGAAALVTIIITVPVLLNKGTDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDIYNGITDWVYEEVFSAVSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVFPYKAGAVNPTVKFFVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHFTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSYLYYISNEYKGMPPGGRNLYKIQLSDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGPLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDRGSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGSYGGYVTSMLGSGSGVFKCGIAVAPVSRWEYDVSYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQAQISKALVDVGVDFAQMWYTDDEDHGIIASSTAHQH
IYTHMSHFQKCFSLP

CGCGCGTCTCCGCCGCCCGCGTGACTTCTGCCTGCGCTCCTTCTCTCTGAACGCTCACTTCCGAGGAGACGCCGACG
ATGAAGACACCGTGGAAGATTCTTCTGGGACTGCTGGGTGCTGCTGCGCTTGTACCATCATCCCGTGCCCCGTG
GTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACAGTCGCAAACTTACACTCTAACTGATTACTTAAAA
AATACTTATAGACTGAAGTTATACTCCTTAAGATGGATTTAGATCATGAATATCTCTACAAACAAGAAAATAAT
ATCTTGGTATTCAATGCTGAATATGGAAACAGCTCAGTTTTCTTGGAGAACAGTACATTTGATGAGTTTGGACAT
TCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTATTCTCTTAGAATACAACACTACGTGAAGCAATGGAGG
CATTCTACACAGCTTCATATGACATTTATGATTTAAATAAAAGGCAGCTGATTACAGAAGAGAGGATTCCAAAC
AACACACAGTGGGTACATGGTCACCAGTGGGTCATAAATTGGCATAATGTTTGGAACAATGACATTTATGTTAAA
ATTGAACCAAATTTACCAAGTTACAGAATCAGATGGACGGGGAAAGAAGATATAATATATAATGGAATAACTGAC
TGGGTTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTCTGTGGTGGTCTCCAAACGGCACTTTTTTTAGCATAT
GCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACTCCTTCTACTCTGATGAGTCACTGCAGTACCCAAAG
ACTGTACGGGTTCCATATCCAAAGGCAGGAGCTGTGAATCCAACGTAAAGTTCTTTGTTGTAAATACAGACTCT
CTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTGCTCCTGCTTCTATGTTGATAGGGGATCACTACTTG
TGTGATGTGACATGGGCAACACAAGAAAGATTTCTTTGCAGTGGCTCAGGAGGATTGAGAACTATTCCGGTCATG
GATATTTGTGACTATGATGAATCCAGTGGAAAGATGGAACGTCTTAGTGGCACGGCAACACATTGAAATGAGTACT
ACTGGCTGGGTTGGAAGATTTAGGCCTTCAGAACCTCATTTTACCCTTGATGGTAATAGCTTCTACAAGATCATC
AGCAATGAAGAAGGTTACAGACACATTTGCTATTTCCAAATAGATAAAAAAGACTGCACATTTATTACAAAAGGC
ACCTGGGAAGTCATCGGGATAGAAGCTCTAACCAAGTGATTATCTATACTACATTAGTAATGAATATAAAGGAATG
CCAGGAGGAAGGAATCTTTATAAAATCCAACCTATTGACTATACAAAAGTGACATGCCTCAGTTGTGAGCTGAAT
CCGGAAGGTGTGAGTACTATTCTGTGTCATTAGTAAAGAGGCGAAGTATTATCAGCTGAGATGTTCCGGTCTCT
GGTCTGCCCCCTCTATACTCTACACAGCAGCGTGAATGATAAAGGGCTGAGAGTCTTGAAGACAATTCAGCTTTG
GATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAACTGGACTTCATTATTTTGAATGAAACAAAATTTTGG
TATCAGATGATCTTGCCTCCTCATTTTGATAAAATCCAAGAAATATCCTCTACTATTAGATGTGTATGCAGGCCCA
TGTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGGCCACTTACCTTGCAAGCACAGAAAACATTATAGTA
GCTAGCTTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATAAGATCATGCATGCAATCAACAGAAGACTGGGAACA
TTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAATTTCAAAAATGGGATTTGTGGACAACAAACGAATTGCA
ATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGGTCTCGGGATCGGGAAGTGGCGTGTTCAAGTGTGGA
ATAGCCGTGGCGCCTGTATCCCGGTGGGAGTACTATGACTCAGTGTACACAGAACGTTACATGGGTCTCCCAACT
CCAGAAGACAACCTTGACCATTACAGAAATTC AACAGTCAATGAGCAGAGCTGAAAATTTTAAACAAGTTGAGTAC
CTCCTTATTATGGAACAGCAGATGATAACGTTCACTTTAGCAGTCACTCAGATCTCCAAAGCCCTGGTGCAT
GTTGGAGTGGATTTCCAGGCAATGTGGTATACTGATGAAGACCATGGAATAGCTAGCAGCACAGCACACCAACAT
ATATATACCCACATGAGCCACTTCATAAAACAATGTTTCTCTTTACCTTAGCAGCTCAAAAATACCATGCCATTTA
AAGCTTATTTAAACTCATTTTTGTTTTATTATCTCAAACTGCAGTGTCAAGATGATGATGATCTTTTAAATAC
ACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAAATTTATACCTATCATCTTAAGTAGGGACTTCTGT
CTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATCCGGTGGGTTTTATTGTTTAAATCATTTCTGCAT
CAGCTGCTGAAACAACAAATAGGAATTGTTTTTATGGAGGCTTTGCATAGATTCCCTGAGCAGGATTTTAAATCTT
TTTCTAAGTGGACTGGTTCAAATGTTGTTCTCTCTTTAAAGGGATGGCAAGATGTGGGCAGTGATGCTACTAGG
GCAGGGACAGGATAAGAGGGATTAGGGAGAGAAGATAGCAGGGCATGGCTGGGAACCCAAAGTCCAAGCATACCAA
CACGAGCAGGCTACTGTGCTGCTCCCTCGGAGAAGAGCTGTTACACCAGAGACTGGGCACAGTTTTCTGAGAAAGA
CTATTCAAACAGTCTCAGGAAATCAAATATCGAAAGCACTGACTTCTAAGTAAACCACAGCAGTTGAAAGACTCC
AAAGAAATGTAAGGGAACTGCCAGCAACGCAGCCCCAGGTGCCAGTTATGGCTATAGGTGCTACAAAAACACA
GCAAGGGTGATGGGAAGCATTGTAAATGTGCTTTTAAAAAAAATACTGATGTTCTAGTGAAAGAGGCAGCTT
GAAACTGAGATGTGAACACATCAGCTTGCCCTGTTAAAGATGAAAATATTTGTATCACAAATCTTAACTTGAAG
GAGTCTTGATCAATTTTTCTTATTTTCAATTTCTTTGAGTGTCTTAATTAAAGAAATATTTTAACTTCTTGAC
TCATTTTAAAAAATGGAACATAAAATACAATGTTATGTATTATTATCCATTCTACATACTATGGAATTTCTCC
CAGTCATTTAATAAATGTGCCTTCATTTTTTC

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FIGURE 337

MKTPWKILLGLLGAAALVTIITVPVLLLNKGTDDATADSRKTYTLTDYLKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDIYNGITDWVYEEEFVSAYSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVPYPKAGAVNPTVKFFVVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSYLYYISNEYKGMPPGGRNLYKIQILIDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDRGRSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGSYGGYVTSMVLGSGSGVFKCGIAVAPVSRWEYDSDVYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQSAQISKALVDVGVDVFQAMWYTDEDHGIASSTAHQH
IYTHMSHFIKQCFSLP

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FIGURE 338

AAGTGCTGCGAGCCCTGGGCCACGCTGGCCGTGCTGGCAGTGGGCCGCCTCGATCCCTCTGCAGTCTTTCCCTTG
AGGCTCCAAGACCAGCAGGTGAGGCCTCGCGGCGCTGAAACCGTGAGGCCCGGACCACAGGCTCCAGATGGACCC
TGGGAAGGACAAAGAGGGGGTGCCCCAGCCCTCAGGGCCGCCAGCAAGGAAGAAATTTGTGATACCCCTCGACGA
GGATGAGGTCCCTCCTGGAGTGGCCAAGCCCTTATTCCGATCTACACAGAGCCTTCCCAGTGTGGACACCTCGGC
CCAGGCGGGCCCTCAGACCTACGCCGAATATGCCATCTCACAGCCTCTGGAAGGGGCTGGGGCCACGTGCCCCAC
AGGGTCAGAGCCCTGGCAGGAGAGACGCCCAACCAGGCCCTGAAACCCGGGGCAAAATCCAACAGCATCATTGT
GAGCCCTCGGCAGAGGGGCAATCCCGTACTGAAGTTCGTGCGCAACGTGCCCTGGGAATTTGGCGACGTAATTCC
CGACTATGTGCTGGGCCAGAGCACCTGTGCCCTGTTCCCTCAGCCTCCGCTACCACAACCTGCACCCAGACTACAT
CCATGGGCGGCTGCAGAGCCTGGGGAAGAACTTCGCCCTTGCGGGTCTGCTTGTCCAGGTGGATGTGAAAGATCC
CCAGCAGGCCCTCAAGGAGCTGGCTAAGATGTGTATCCTGGCCGACTGCACATTGATCCTCGCCTGGAGCCCCGA
GGAAGCTGGGCGGTACCTGGAGACCTACAAGGCCTATGAGCAGAAACCAGCGGACCTCCTGATGGAGAAGCTAGA
GCAGGACTTCGTCTCCCGGGTGACTGAATGTCTGACCACCGTGAAGTCAGTCAACAAAACGGACAGTCAGACCCCT
CCTGACCACATTTGGATCTCTGGAACAGCTCATCGCCGCATCAAGAGAAGATCTGGCCTTATGCCCAGGCCTGGG
CCCTCAGAAAGCCCGGAGGCTGTTTGATGTCTGACGAGCCCTTCTTGAAAGTACCCTTGATGACCCAGCTGCC
AAGGAAACCCCCAGTGTAAATAATAAATCGTCTCCAGGCCAGGCTC

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FIGURE 339

MDPGKDKEGVPPQPSGPPARKKFVIPLDEDEVPPGVAKPLFRSTQSLPTVDTSAQAAPQTYAEYAI SQPLEGAGAT
CPTGSEPLAGETPNQALKPGAKSNSIIIVSPRQRGNPVLKFVRNVPEFGDVIPDYVLGQSTCALFLSLRYHNLHP
DYIHGRLQSLGKNFALRVLLVQVDVKDPQQALKELAKMCILADCTLILAWSPEEAGRYLETYKAYEQKPADLLME
KLEQDFVSRVTECLTTVKS VNKTDSQTLLTTFGSLEQLIAASREDLALCPGLGPQKARRLFDVLHEPFLKVP

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FIGURE 340A

GCCAGCGATCAGAGCAGCGCTGGGTGTTTCAGGGGCCAAGATGGCGGCGCGCCGGGGACGGAGAGACGGAGTCGCG
CCGCCCCCAGTGGGGCCCCGGTCCGGACCCTGGCGGGGGAGCCCGCGGCAGTGGTTGGCGAAGTCGAAGCCAA
GCGCCGTATGGGACTTTGGGCGCTGTGAGCGGCGGCGAGCAGGTGCTGCTGCATGAGGAGGCGGGTGATTCTGGC
TTTGTCAGTCTCTCTCGGCAGGGCCCATCTCTGAGGGACAAGGACCTGGAAATGGAGGAGCTAATGCTGCAGGAT
GAGACACTGCTGGGGACCATGCAGAGCTACATGGATGCCTCCCTTATCTCCCTCATTGAGGATTTTGGGAGCCTT
GGAGAGAGCAGGTTATCTCTGGAGGACCACAATGAAGTGTGCTGCTCACGGCTCTGACGGAGATCTTGGACAAT
GCAGATTCTGAGAACCTTTCTCCATTGACAGCATTCTGATTGCGAGCTGCTTGTGTACCCCCGGGAGGGCTCC
TCTCTGCACAAGCTGCTTACTCTCTCTCGGACACCCCCAGAACGTGACCTCATCACCCCAGTTGACCCACTGGGG
CCCAGTACGGGCAGCAGTAGAGGGAGTGGGGTTGAAATGTCTCTTCCAGATCCCTCTTGGGACTTCTCCCCACCC
TCTTTCTTAGAGACCTCTTCCCCCAAGCTTCCTAGCTGGAGACCCCCAAGATCAAGACCACGCTGGGGCCAAATCC
CCACCTCCCCAGCAGCGCAGTGATGGAGAAGAAGAGGAGGAGGTGGCCAGCTTCAGTGGCCAGATTCTTGCCGGG
GAGCTTGACAACCTGTGTGAGCAGTATCCCGGACTTCCCCATGCATTTGGCCTGCCCTGAGGAGGAAGATAAAGCA
ACAGCAGCAGAGATGGCAGTGCCAGCAGCTGGTGATGAGAGCATCTCCTCCCTGAGTGAGCTGGTGCGGGCCATG
CACCCATACTGCCTGCCCAACCTCACCCACCTGGCATCACTTGAGGATGAGCTTCAGGAGCAGCCAGATGATTTG
ACACTGCCTGAGGGCTGCGTAGTGCTGGAGATTGTGGGGCAGGCAGCCACAGCTGGCGATGACCTGGAGATCCCA
GTTGTGGTGCGACAGGTCTCTCCTGGACCCCGGCTGTGCTCCTGGATGACTCGCTAGAGACTAGTTCTGCCTTG
CAGCTGCTTATGCCTACACTGGAGTCAGAGACAGAGGCTGCTGTGCCCAAGGTAACCTCTGCTCTGAGAAAGAG
GGGTTGTCAATTGAACCTCAGAGGAGAAGCTGGACTCAGCCTGCTTATTGAAGCCAGGGAGGTGCTGGAGCCGGTG
GTGCCCAAGGAGCCTCAGAACCACCTGCCAATGCAGCACCAGGTTCCCAGAGAGCTCGAAAGGGCAGGAAGAAG
AAGAGCAAGGAGCAGCCAGCAGCCTGTGTGGAAGGCTATGCCAGGAGGCTGAGGTCATCTTCTCGCGGGCAGTCT
ACTGTAGGTACAGAAGTGACCTCTCAGGTAGACAACCTGCAGAAACAGCCTCAGGAAGAACCTCAAAAAGAGTCT
GGGCCTCTCCAGGGTAAGGGGAAGCCCCGGGCTTGGGCTCGGGCCTGGGCAGCTGCCTTGGAGAATTCTAGCCCT
AAGAACCTTGAGAGAAGTGCTGGACAAAGTAGTCTGCTAAAGAAGGCCCTCTAGACCTCTACCCAAAGCTGGCT
GACACTATCCAAACCAATCCTATACCAACCCATCTCTCATTGGTCGACTCTGCCCAAGCCAGCCCCATGCCAGTT
GACTCTGTTGAAGCTGATCCCACTGCAGTTGGCCCTGTTCTAGCTGGCCCTGTACCTGTTGACCCCTGGGTTGGTT
GACCTTGCTTCAACCAGCTCAGAACTGGTTGAGCCTCTCCCGGCTGAGCCAGTGCTGATCAACCCAGTCTTGCT
GACTCAGCAGCAGTTGACCTGCAGTGTTCCCATCTCAGATAACTTGCCACCAGTTGATGCTGTCCCGTCTGGC
CCAGCACCAGTTGATCTAGCACTGGTTGACCCTGTTTCTAATGACCTGACTCCAGTTGACCCAGTGCTAGTTAAG
TCCAGACCAACTGATCCCAGACGTGGTGCACTGTCATCAGCCCTGGGGGGTTTACGACCCCCAGCTCCTCGTGAG
TCAGAGTCCTTGACCCACCAAAGACCATCATCCCTGAAGTCAAAGAGGTTGTGGATTCTCTGAAAATTGAAAGT
GGTACCAGTGCTACAACCCATGAAGCCAGACCTCGGCCTCTCAGCTTATCTGAGTACCGGCGACGAAGGCAGCAA
CGCCAAGCAGAAACAGAAGAGAGAAGTCCACAGCCCCCAACTGGGAAGTGGCCTAGCCTTCCAGAGACTCCCACA
GGGCTGGCAGACATCCCTTGCTTGTCTATCCACCAGCCCCAGCCAAGAAGACAGCTCTGCAGAGAAGCCCTGAA
ACACCCCTTGAGATTTGCCTTGTGCCTGTAGGTCCAGCCCTGCTTCTCCTAGTCTCTGAGCCACCTGTAAGCAAA
CCTGTGGCCTCATCTCCCACTGAGCAGGTGCCATCCCAGGAGATGCCACTGTTGGCGAGACCTTCCCTCCTGTG
CAGTCTGTGTCCCTGCTGTGCCCCACACCTCCCTCGATGCTGCTGCCCTGCCCTTCCCTGCAGGTGGGCTTGGC
ATGCCCCCAGTCTGCCCCACCTCCCTTGACGCTCCTAGTCTTCCATTGTCTATGGGGCCAGTACTACCTGAT
CCGTTTACTCACTATGCCCCCTTGCCATCCTGGCCTTGTTATCCTCATGTGTCCCTTCTGGCTATCCTTGCCCTG
CCCCCCCCACCAACGGTGCCCCCTAGTGTCTGGTACTCCTGGTGCTATGCCGTGCCCTCCCACTGCAGTGTGCCT
TGGGCACCCCCCTCTGCCCCAGTCTCACCTTACAGTTCCACATGTACCTATGGGCCCTTGGGATGGGGCCAGGG
CCTCAACATGCTCCATTCTGGTCTACTGTTCCCCACCTCCTTTGCCCTCCAGCCTCCATTGGGAGAGCTGTTCCC
CAACCTAAATGGAGTCTAGGGGCACTCCAGCTGGCCCTCCTGAAAATGTACTTCCCTTGTCGATGGCTCCTCCC
CTCAGTCTTGGGCTACCTGGCCATGGAGCTCCTCAGACAGAGCCTACCAAGGTGGAGGTCAAGCCAGTGCTGCA
TCTCCCCATCCGAAACACAAGGTGTCTGCCCTGGTGCAAAGTCCCCAGATGAAGGCTCTAGCATGTGTGTCTGCT
GAAGGTGTGACTGTTGAGGAGCCTGCATCAGAGAGGCTAAAGCCTGAGACCCAAGAGACCAGGCCCCAGGGAGAAG
CCCCCTTGCCCTGCTACCAAGGCTGTTCCACACCAAGGCAGAGCACTGTCCCAAGCTGCCTGCTGTCCACCCA
GCCCCGTCTAAGGAAGCTGTCTTCCCTGCCTACCCACGTACTCAGGGTTCTGAAGATGTGGTACAGGCTTTTCATC
AGTGAGATTGGAATTGAGGCATCGGACCTGTCCAGTCTGCTGGAGCAGTTTGAGAAATCAGAAGCCAAAAAGGAG

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FIGURE 340B

TGTCCTCCTCCGGCTCCTGCTGACAGCTTGGCTGTAGGAAACTCAGGCGGCGTTGACATTCCCCAGGAGAAGAGG
CCCCTAGACCGGTTACAAGCCCCAGAAGTGGCCAACGTGGCAGGGCTCACCCCTCCAGCTACCCCTCCCCACCAG
TTATGGAAGCCCCCTGGCTGCTGTCTCACTGCTGGCCAAAGCCAAATCTCCTAAGTCCACGCCCAGGAGGGAACC
CTGAAGCCTGAAGGAGTTACGGAGGCCAAACATCCAGCTGCAGTTCGCCTCCAAGAAGGGGTCCATGGCCCTAGT
CGAGTCCATGTGGGCTCTGGGGACCATGACTATTGTGTCCGGAGCAGGACCCCCCAAAAAGATGCCTGCCCTA
GTCATTCCAGAGGTGGGCTCCCGATGGAATGTCAAGCGCCATCAGGACATCACCATCAAACCTGTCTTGTCTTG
GGCCAGCTGCCCCCTCCGCCCCATGCATAGCTGCCTCCCGGGAGCCGCTTGATCACAGGACTAGCAGTGAGCAG
GCAGATCCCTCAGCACCCCTGCCTTGCCCCATCCAGCTTGCTGTCCCTGAGGCCTCACCTGCCGGAATGACATG
AACACTAGGACTCCCCCTGAACCCTCAGCCAAGCAGCGGTCAATGCGCTGTTACCGAAAAGCCTGCAGGTGAGCC
AGCCCCCAAGCCAGGGCTGGCAGGGCCGCGGAGGCCGCAACAGCCGTTCTGTGAGCTCTGGGTCCAACCGGACT
AGCGAAGCATCTTCCTCATCCTCATCATCGTCTTCCTCATCCCGATCTCGGTCCAGGTCCCTCTCCCCCCCACAC
AAGAGGTGGCGAAGGTCCAGCTGTAGTTCTCTGGACGTTCTCGAAGATGCTCTTCCTCTTCTTCGTCATCATCT
TCCTCTTCGTCTTCCTCATCCTCATCATCCAGTTCTCGAAGCCGCTCACGATCCCCATCCCCCGCCGGAGAAGT
GACAGGAGGCGGCGGTACAGCTCTTATCGTTTACATGACCATTACCAAAGGCAAAGAGTGCTACAAAAGGAGCGT
GCAATAGAAGAAAGAAGGGTGGTCTTCATTGGAAAGATACCTGGCCGCATGACTCGATCAGAGCTGAAACAGAGG
TTCTCCGTTTTTGGAGAGATTGAGGAGTGACCATCCACTTCCGTGTCCAAGGGGACAACACTACGGCTTCGTCACT
TATCGCTATGCTGAGGAGGCATTTGCAGCCATTGAGAGTGGCCACAAGCTGCGGCAGGCAGATGAGCAGCCCTTT
GATCTCTGCTTTGGGGGCCGAAGGCAGTTCTGCAAGAGGAGCTATTCTGATCTTGACTCCAACCGGGAAGACTTT
GACCCAGCACCTGTAAAGAGCAAATTTGATTCTCTTGACTTTGACACATTGTTGAAACAGGCCCAGAAGAACCTC
AGGAGGTAAACCTTGGGCCCTTCCCTGCTATCCTTTTTCTCCTTTGGAGGTGCCAACCTCCTCCACCCCCCTTCCC
CTACTCTAGGGGAGAGAGCTGCTAGTGAGATGACTGTTTTATAAAGAAATGGAAAAAAGTGAAATAAAAAATATG
TTGAATCAGATTTTTTAAAGGGGTATTTGTTTTTTTATAACAGGTATTGAAACAAGTTAACTTGCAATTCCTATG
TAAGATAGGAGGGGCTGAGGGGATCCCCAGTGTTTGGAACATAAGTCACTATGCAGACTAATAAACATCAACTAG
AGAGAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 341

MAARRGRRDGVAPPPSGGPGDPGGGARGSGWRSRSQAPYGTILGAVSGGEQVLLHEEAGDSGFVSLSRQGPSLRD
KDLEMEELMLQDETLLGTMQSYMDASLISLIEDFGSLGESRLSLEDHNEVSLLTALTEILDNADSENLSPFDSIP
DSELLVSPREGSSSLHKLLTSLRTPPERDLITPVDPLGPSTGSSRSGSVEMSLPDPSWDFSPPSFLETSSPKLPSW
RPPRSRPRWGQSPPPQQRSDGEEEEEVASFSGQILAGELDNCVSSIPDFPMHLACPEEEDKATAAEMAVPAAGDE
SISSISELVRAMHPYCLPNLTHLASLEDELQEQPDDLTLPPEGCVVLEIVGQAATAGDDLEIPVVVRQVSPGPRPV
LLDDSLLETSSALQLLMPTLESETEAAVPKVTLCSEKEGLSLNSEEKLD SACLLKPREVVPEVPVPEPQNPPANAA
PGSQRARKGRKKKSKEQPAACVEGYARRLRSSSRGQSTVGTEVTSQVDNLQKQPOEELQKESGPLQGKGKPRAWA
RAWAAALENSSPKNLSAGQSSPAKEGPLDLYPKLADTIQTNP IPTHLSLVDSAQASPMMPVDSVEADPTAVGPV
LAGPVFVDPGLVDLASTSSELVEPLPAEPVLINPVLADSAAVDPAVVPISDNLPPVDAVPSPGAPVDLALVDPVP
NDLTPVDPLVKSRPTDPRRGAVSSALGGSAPQLLVESESIDPPKTI IPEVKEVVD SLKIESGTSATTHEARPRP
LSLSEYRRRRRQQRQAETEERSQPPTGKWPSLPETPTGLADIPCLVIPPAPAKKTALQ RSPETPLEICLVPVGPS
PASPSPEPPVSKPVASSPTEQVPSQEMPLLARSPPVQSVSPA VPTPPSMSAALPFPAGGLGMPPSLPPPPLQPP
SLPLSMGPVLPDPFTHYAPLPSWPCYPHVSPSGYPCLPPPFTVPLVSGTPGAYAVPPTCSVPWAPPPAPVSPYSS
TCTYGPLGWGPGPQHAPFWSTVPPPPPLPPASIGRAVPQPKMESRGTPAGPPENVLPLSMAPPLSLGLPGHGAPQT
EPTKVEVKPVPA SPHPKHVSALVQSPQMKALACVSAEGVTVEEPASERLKPETQETRPREKPPLPATKAVPTPR
QSTVPKLP AVHPARLRKLSFLPTPRTQGS EDVVQAF ISEIGIEASDLSSLLEQFEKSEAKKECPPPAPADSLAVG
NSGGVDIPQEKRPLDRLQAPELANVAGLTTPPATPPHQLWKPLAAVSL LAKAKSPKSTAQEGTLKPEGVTEAKHPA
AVRLQEGVHGPPSRVHVGS GDHDYCVRSRTPPKKMPALVIPEVGSRWNVKRHQDITIKPVL SLGPAAPPPPCIAAS
REPLDHRTSSEQADPSAPCLAPSSLLSPEASPCRNDMNTRTPPEPSAKQ RSMRCYRKACRSASPSSQGWQGRRGR
NSRSVSSGSNRTSEASSSSSSSSSSSSRSRSRSLSPPHKRWRSSC SSSGRSRRCSSSSSSSSSSSSSSSSSSSSSR
SRSRSPSPRRRS DRRRRYSYRSHDHYQRQ RVLQKERAIEERRVVF IGKIPGRMTRSELKQRF SVFGEIEECTIH
FRVQGDNYGFVTYRYAEEAFAAIESGHKL RQADEQPFDLCFGGRRQFCKRSYSDLDSNREDFDPAPVKSKFDSL D
FDTLLKQAQKNLRR

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FIGURE 342

CCGGAAGTGA CTGCGGACGAATCGGCGTTTGCCGAGGCTGGCATAGATTGGCTGTCTCCGCTCATAGCTGCTTT
TGGCGCGAAAGATGCCGGGTCTGGTTGACTCAAACCCTGCCCCGCCTGAGTCTCAGGAGAAGAAGCCGCTGAAGC
CCTGCTGCGCTTGCCCGGAGACCAAGAAGGCGCGGATGCGTGTATCATCGAGAAAGGAGAAGAACACTGTGGAC
ATCTAATTGAGGCCCAAGGAATGCATGAGAGCCCTAGGATTTAAAAATATGAATGGTGGTCTGCTGTGTGAAT
AAATAATTCCTGAAGAATGAAGAAGATTAATTTTGGGAGTTCTTTGACGAACTTTGATATGTGGAAAAAGTATTT
ATAATTTATTGTAAGAAGAAAGTAAAATATTACTAGTGGAAGATCTTC

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FIGURE 343

MPGLVDSNPAPPESQEKPLKPCCACPETKKARDACIIEKGEEHCGHLIEAHKECMRALGFKI

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FIGURE 344

ATCCAATACAGGAGTGACTTGGAACCTCATTCTATCACTATGAAGAAAAGTGGTGTCTTTTCCTCTTGGGCATC
ATCTTGCTGGTTCTGATTGGAGTGCAAGGAACCCAGTAGTGAGAAAGGGTCGCTGTTTCCTGCATCAGCACCAAC
CAAGGGACTATCCACCTACAATCCTTGAAAGACCTTAAACAATTTGCCCAAGCCCTTCCTGCGAGAAAATTGAA
ATCATTGCTACACTGAAGAATGGAGTTCAAACATGTCTAAACCCAGATTTCAGCAGATGTGAAGGAAGTATTGAAA
AAGTGGGAGAAAACAGGTCAGCCAAAAGAAAAAGCAAAAGAATGGGAAAAAACATCAAAAAAGAAAGTTCTGAAA
GTTGAAAATCTCAACGTTCTCGTCAAAGAAGACTACATAAGAGACCACTTCACCAATAAGTATTCTGTGTTAA
AAATGTTCTATTTTAATTATACCGCTATCATTCCAAAGGAGGATGGCATATAATACAAAGGCTTATTAATTTGAC
TAGAAAAATTTAAAACATTACTCTGAAATTGTAACATAAGTTAGAAAAGTTGATTTTAAGAATCCAAACGTTAAGAA
TTGTTAAAGGCTATGATTGTCCTTTGTTCTTCTACCAACCCACCAGTTGAATTTTCATCATGCTTAAGGCCATGATTT
TAGCAATACCCATGTCTACACAGATGTTACCCCAACCACATCCCACTCACAAACAGCTGCCTGGAAGAGCAGCCCT
AGGCTTCCACGTAAGTGCAGCCTCCAGAGAGTATCTGAGGCACATGTCAGCAAGTCCTAAGCCTGTTAGCATGCTG
GTGAGCCAAGCAGTTTGAAATTGAGCTGGACCTCACCAAGCTGCTGTGGCCATCAACCTCTGTATTTGAATCAGC
CTACAGGCCCTCACACACAATGTGTCTGAGAGATTCATGCTGATTGTTATTGGGTATCACCAGTGGAGATCACCAG
TGTGTGGCTTTTCAGAGCCTCCTTTCTGGCTTTGGAAGCCATGTGATTCCATCTTGCCCGCTCAGGCTGACCACTT
TATTTCTTTTGTTCCTTTGCTTCATTCAAGTCAGCTCTTCTCCATCCTACCACAATGCAGTGCCTTTCTTCT
CTCCAGTGCACCTGTCATATGCTCTGATTTATCTGAGTCAACTCCTTTCTCATCTTGTCCCCAACACCCACAGA
AGTGTCTTCTTCTCCCAATTCATCCTCACTCAGTCCAGCTTAGTTCAAGTCCTGCCTCTTAAATAAACCTTTTTG
GACACACAAAATTATCTTAAACTCCTGTTTCACTTGGTTCAGTACCACATGGGTGAACACTCAATGGTTAACTAA
TTCTTGGGTGTTTATCCTATCTCTCAACCAGATTGTCAGCTCCTTGAGGGCAAGAGCCACAGTATATTTCCCTG
TTTCTTCCACAGTGCCTAATAATACTGTGGAAGTGGTTTTAATAATTTTTTAATTGATGTTGTTATGGGCAGGA
TGGCAACCAGACCATTGTCTCAGAGCAGGTGCTGGCTCTTTCCTGGCTACTCCATGTTGGCTAGCCTCTGGTAAC
CTCTTACTTATTATCTTTCAGGACACTCACTACAGGGACCAGGGATGATGCAACATCCTTGTCTTTTTATGACAGG
ATGTTTGCTCAGCTTCTCCAACAATAAGAAGCACGTGGTAAAACACTTGCGGATATTCTGGACTGTTTTTAAAAA
ATATACAGTTTACCGAAAATCATATAATCTTACAATGAAAAGGACTTTATAGATCAGCCAGTGACCAACCTTTTC
CCAACCATACAAAAATTCCTTTTCCCGAAGGAAAAGGGCTTTCTCAATAAGCCTCAGCTTTCTAAGATCTAACAA
GATAGCCACCGAGATCCTTATCGAAACTCATTTTAGGCAAATATGAGTTTTATTGTCCGTTTACTTGTTCAGAG
TTTGTATTGTGATTATCAATTACCACACCATCTCCCATGAAGAAAGGGAACGGTGAAGTACTAAGCGCTAGAGGA
AGCAGCCAAGTCGGTTAGTGGAAGCATGATTGGTGCCAGTTAGCCTCTGCAGGATGTGGAAACCTCCTTCCAGG
GGAGGTTCAAGTGAATTGTGTAGGAGAGGTTGTCTGTGGCCAGAATTTAAACCTATACTCACTTTCCCAAATTGAA
TCACTGCTCACACTGCTGATGATTTAGAGTGCTGTCCGGTGGAGATCCCACCCGAACGTCTTATCTAATCATGAA
ACTCCCTAGTTCCTTCATGTAACCTCCCTGAAAAATCTAAGTGTTCATAAATTTGAGAGTCTGTGACCCACTTA
CCTTGCACTCTCACAGGTAGACAGTATATACTAACAACCAAGACTACATATTGTCACTGACACACACGTTATAA
TCATTTATCATATATATACATACATGCATACACTCTCAAAGCAAATAATTTTTCACTTCAAACAGTATTGACTT
GTATACCTTGTAATTTGAAATATTTTCTTTGTTAAAATAGAATGGTATCAATAAATAGACCATTAAATCAG

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FIGURE 345

MKKSGVLFLLGIILLVLIGVQGTPVVRKGRCSCTNQGTHLQSLKDLKQFAPSPSCEKIEIIATLKNGVQTCL
NPDSADVKELIKKEKQVSQKKKQKNGKKHQKKVLKVRKSQRSRQKKT

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FIGURE 346

GAGCGCGGCTGGAGTTTGCTGCTGCCGCTGTGCAGTTTGTTCAGGGGCTTGTGGTGGTGAGTCCGAGAGGCTGCCG
TGTGAGAGACGTGAGAAGGATCCTGCACTGAGGAGGTGGAAAGAAGAGGATTGCTCGAGGAGGCTGGGGTCTGT
GAGGCAGCGGAGCTGGGTGAAGGCTGCCGGTCCGGCGAGGCCCTGAGCTGTGCTGTGCTC**ATG**CCTCAAACCCGA
TCCCAGGCACAGGCTACAATCAGTTTTCCAAAAAGGAAGCTGTCTCGGGCATTGAACAAAGCTAAAAACTCCAGT
GATGCCAACTAGAACCAACAAATGTCCAAACCGTAACCTGTTCTCCTCGTGTAAGGCCCTGCCTCTCAGCCCC
AGGAAACGTCTGGGCGATGACAACCTATGCAACACTCCCCATTTACCTCCTTGTCTCCACCAAAGCAAGGCAAG
AAAGAGAATGGTCCCCCTCACTCACATACACTTAAGGGACGAAGATTGGTATTTGACAATCAGCTGACAATTAAG
TCTCCTAGCAAAAGAGAAGTAGCCAAAGTTCACCAAAAACAAAATACTTTCTTCAGTTAGAAAAAGTCAAGAGATC
ACAACAAATTCTGAGCAGAGATGTCCACTGAAGAAAGAATCTGCATGTGTGAGACTATTCAAGCAAGAAGGCACT
TGCTACCAGCAAGCAAAGCTGGTCTGAACACAGCTGTCCAGATCGGCTGCCTGCCAGGGAAAGGGAGATGGAT
GTCATCAGGAATTTCTTGAGGGAACACATCTGTGGGAAAAAGCTGGAAGCCTTTACCTTTCTGGTGCTCCTGGA
ACTGGAAAACTGCCTGCTTAAGCCGGATTCTGCAAGACCTCAAGAAGGAAGTGAAGGCTTTAAACTATCATG
CTGAATTGCATGTCCTTGAGGACTGCCCAGGCTGTATTCCAGCTATTGCTCAGGAGATTTGTGAGGAAGAGGTA
TCCAGGCCAGCTGGGAAGGACATGATGAGGAAATTGGAAAAACATATGACTGCAGAGAAGGGCCCCATGATTGTG
TTGGTATTGGACGAGATGGATCAACTGGACAGCAAAGGCCAGGATGTATTGTACACGCTATTTGAATGGCCATGG
CTAAGCAATCTCACTTGGTGCTGATTGGTATTGCTAATACCTTGATCTCACAGATAGAATTCTACCTAGGCTT
CAAGCTAGAGAAAAATGTAAGCCACAGCTGTTGAACCTCCACCTTATACCAGAAATCAGATAGTCACTATTTTG
CAAGATCGACTTAATCAGGTATCTAGAGATCAGGTTCTGGACAATGCTGCAGTTCAATTCTGTGCCCGCAAAGTC
TCTGCTGTTTCAGGAGATGTTGCAAAGCACTGGATGTTTGCAGGAGAGCTATTGAAATTGTAGAGTCAGATGTC
AAAAGCCAGACTATTCTCAAACCACTGTCTGAATGTAAATCACCTTCTGAGCCTCTGATTCCCAAGAGGGTTGGT
CTTATTACATATCCCAAGTCATCTCAGAAGTTGATGGTAACAGGATGACCTTGAGCCAAGAAGGAGCACAAGAT
TCCTTCCCTCTTCAGCAGAAGATCTTGGTTTGCTCTTTGATGCTCTTGATCAGGCAGTTGAAAATCAAAGAGGTC
ACTCTGGGGAAGTTATATGAAGCCTACAGTAAAGTCTGTGCAAACAGCAGGTGGCGGCTGTGGACCAGTCAGAG
TGTTTGTCACTTTCAGGGCTCTTGGAAGCCAGGGGCATTTTAGGATTAAAGAGAAACAAGGAAACCCGTTTGACA
AAGGTGTTTTTCAAGATTGAAGAGAAAGAAATAGAACATGCTCTGAAAGATAAAGCTTTAATTGGAAATATCTTA
GCTACTGGATTGCCT**TAA**ATTCTTCTCTTACACCCACCCGAAAGTATTTCAGCTGGCATTTAGAGAGCTACAGTC
TTCATTTTAGTGCTTTACACATTCGGGCCTGAAAACAAATATGACCTTTTTTTACTTGAAGCCAATGAATTTTAAT
CTATAGATTCTTTAATATTAGCACAGAATAATATCTTTGGGTCTTACTATTTTTTACCCATAAAAGTGACCAGGTA
GACCCTTTTTAATTACATTCACTACTTCTACCCTTGTGTATCTCTAGCCAATGTGCTTGCAAGTGTACAGATCT
GTGTAGAGGAATGTGTGTATATTTACCTCTTCGTTTGCTCAAACATGAGTGGGTATTTTTTGTGTTTTTTTTT
GTTGTTGTTGTTTTTGAGGCGCGTCTCACCCCTGTGCCCAGGCTGGAGTGCAATGGCGCGTCTCTGCTCACTAC
AGCACCCGCTTCCAGGTTGAAGTGATTCTCTTGCCCTCAGCCTCCCGAGTAGCTGGGATTACAGGTGCCACCAC
CGCGCCAGCTAATTTTTTAATTTTTTAGTAGAGACAGGGTTTTACCATGTTGGCCAGGCTGGTCTTGAATCCTG
ACCCTCAAGTGATCTGCCACCTTGGCCTCCCTAAGTGCTGGGATTATAGGCGTGAGCCACCATGCTCAGCCATT
AAGGTATTTTGTTAAGAACTTTAAGTTTAGGGTAAGAAGAATGAAAATGATCCAGAAAAATGCAAGCAAGTCCAC
ATGGAGATTTGGAGGACACTGGTTAAAG

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FIGURE 348

GAGCGCGGCTGGAGTTTGTCTGCTGCCGCTGTGCAGTTTGTTCAGGGGCTTGTGGTGGTGAGTCCGAGAGGCTGCG
TGTGAGAGACGTGAGAAGGATCCTGCACTGAGGAGGTGGAAAGAAGAGGATTGCTCGAGGAGGCCTGGGGTCTGT
GAGGCAGCGGAGCTGGGTGAAGGCTGCGGGTTCGGGCGAGGCCTGAGCTGTGCTGTCGTCATGCCTCAAACCCGA
TCCCAGGCACAGGCTACAATCAGTTTCCAAAAAGGAAGCTGTCTCGGGCATTGAACAAAGCTAAAACTCCAGT
GATGCCAACTAGAACCAACAAATGTCCAAACCGTAACCTGTTCTCCTCGTGTAAGCCCTGCCTCTCAGCCCC
AGGAAACGTCTGGGCGATGACAACCTATGCAACACTCCCCATTTACCTCCTTGTTCTCCACCAAAGCAAGGCAAG
AAAGAGAATGGTCCCCCTCACTCACATACACTTAAGGGACGAAGATTGGTATTTGACAATCAGCTGACAATTAAG
TCTCCTAGCAAAAGAGAACTAGCCAAAAGTTCACCAAAACAAAATACTTTCTTCAGTTAGAAAAAGTCAAGAGATC
ACAACAAATTCTGAGCAGAGATGTCCACTGAAGAAAGAATCTGCATGTGTGAGACTATTCAAGCAAGAAGGCACT
TGCTACCAGCAAGCAAAGCTGGTCTGAACACAGCTGTCCAGATCGGCTGCCTGCCAGGGGAAAGGGAGATGGAT
GTCATCAGGAATTTCTTGAGGGGAACACATCTGTGGGAAAAAGCTGGAAGCCTTTACCTTTCTGGTGTCTCTGGA
ACTGGA AAAACTGCCTGCTTAAGCCGGATTCTGCAAGACCTCAAGAAGGAAGCTGAAAGGCTTTAAACTATCATG
CTGAATTGCATGTCTTGAGGACTGCCAGGCTGTATTCCAGCTATTGCTCAGGAGATTGTGAGGAAGAGGTA
TCCAGGCCAGCTGGGAAGGACATGATGAGGAAATTGGAAAAACATATGACTGCAGAGAAGGGCCCCATGATTGTG
TTGGTATTGGACGAGATGGATCAACTGGACAGCAAAGGCCAGGATGTATTGTACACGCTATTTGAATGGCCATGG
CTAAGCAATTCTCACTTGGTGCTGATTGGTATTGCTAATACCCTGGATCTCAGAGATAGAATTCTACCTAGGCTT
CAAGCTAGAGAAAAATGTAAGCCACAGCTGTTGAACTTCCACCTTATACCAGAAATCAGATAGTCACTATTTTG
CAAGATCGACTTAATCAGGTATCTAGAGATCAGGTTCTGGACAATGCTGCAGTTCAATTCTGTGCCCGCAAAGTC
TCTGCTGTTTCAGGAGATGTTGCAAAAGCACTGGATGTTTGCAGGAGAGCTATTGAAATTGTAGAGTCAGATGTC
AAAAGCCAGACTATTCTCAAACCACTGTCTGAATGTAAATCACCTTCTGAGCCTCTGATTCCCAAGAGGGTTGGT
CTTATTACATATCCCAAGTCATCTCAGAAGTTGATGGTAACAGGATGACCTTGAGCCAAGAAGGAGCACAAGAT
TCCTTCCCTCTTCAGCAGAAGATCTTGGTTTGCTCTTTGATGCTCTTGATCAGGCAGTTGAAAATCAAAGAGGTC
ACTCTGGGGAAGTTATATGAAGCCTACAGTAAAGTCTGTGCAAAACAGCAGGTGGCGGCTGTGGACCAGTCAGAG
TGTTTGTCACTTTCAGGGCTCTTGGAAGCCAGGGGCATTTTAGGATTAAAGAGAAACAAGGAAACCCGTTTGACA
AAGGTGTTTTTCAAGATTGAAGAGAAAGAAATAGAACATGCTCTGAAAGATAAAGCTTTAATTGGAAATATCTTA
GCTACTGGATTGCCTTAAATTCTTCTCTTACACCCCAACCCGAAAGTATTGAGCTGGCATTTAGAGAGCTACAGTC
TTCATTTTAGTGCTTTACACATTCGGGCCTGAAAACAAATATGACCTTTTTTACTTGAAGCCAATGAATTTTAAT
CTATAGATTCTTTAATATTAGCACAGAATAATATCTTTGGGTCTTACTATTTTTTACCCATAAAAGTGACCAGGTA
GACCCTTTTTAATTACATTCACTACTTCTACCACTTGTGTATCTCTAGCCAATGTGCTTGCAAGTGTACAGATCT
GTGTAGAGGAATGTGTGTATATTTACCTCTTCTGTTTGTCTCAAACATGAGTGGGTATTTTTTTGTTTGTTTTTTT
GTTGTTGTTGTTTTTGAGGCGCGTCTCACCTGTTGCCAGGCTGGAGTGCAATGGCGCGTTCTCTGCTCACTAC
AGCACCCGCTTCCCAGGTTGAAGTGATTCTCTTGCTCAGCCTCCCGAGTAGCTGGGATTACAGGTGCCACCAC
CGCGCCAGCTAATTTTTTAATTTTTTAGTAGAGACAGGGTTTTACCATGTTGGCCAGGCTGGTCTTGAACCTCTG
ACCCTCAAGTGATCTGCCACCTTGGCCTCCCTAAGTGCTGGGATTATAGGCGTGAGCCACCATGCTCAGCCATT
AAGGTATTTGTGAAGAACTTTAAGTTTAGGGTAAGAAGAATGAAATGATCCAGAAAAATGCAAGCAAGTCCAC
ATGGAGATTGAGGACACTGGTTAAAG

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FIGURE 349

MPQTRSQAQATISFPKRKLSRALNKAKNSSDAKLEPTNVQTVTCSPRVKALPLSPRKRLGDDNLCNTPHLPPCSP
PKQGKKENGPPHSHTLKGRRLVFDNQLTIKSPSKRELAKVHQNKILSSVRKSQEITTNSEQRCPLKKESACVRLF
KQEGTCYQQAKLVLNTAVPDRLPAREREMDVIRNFLREHICGKKAGSLYLSGAPGTGKTACLSRILQDLKKELKG
FKTIMLNCMSLRITAVFPAAIAQEICQEEVSRPAGKDMMRKLEKHMTAEKGPMIVLVLEMDQLDSKGQDVLYTL
FEWPWLSNSHLVLIGIANTLDLTDRLPRLQAREKCKPQLLNFPFYTRNQIVTILQDRLNQVSRDQVLDNAAVQF
CARKVSAVSGDVRKALDVCRRRAIEIVESDVKSQTILKPLSECKSPSEPLIPKRVGLIHISQVISEVDGNRMTLSQ
EGAQDSFPLQQKILVCSLMLLIRQLKIKEVTLGKLYEAYSKVCRKQQVAAVDQSECLSLSGLLEARGILGLKRNK
ETRLTKVFFKIEEKEIEHALKDKALIGNILATGLP

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FIGURE 350

GGAGTGC GGGGCGCCCGGCCAGGGGAGCCGCCACAGCCATGGATTGCAAAGATAGACCAGCTTTTCCAGTTAA
GAAGTTAATAACAAGCCCGTCTGCCGTTTAAGCGCCTGAATCTTGTCCCAAAGGGGAAAGCCGATGACATGTCAGA
CGATCAGGGTACTTCTGTGCAAAGTAAAAGCCCCGATTTAGAGGCCTCTTTGGACACCTTGGAAAACAACGTCA
TGTGGGTTCTGACATAGACTTTAGACCGAAACTTGTCAACGGGAAGGGTCCCTTAGATAACTTTTAAAGAAATAG
AATCGAAACCAGTATTGGCCAGAGCACAGTCATCATTGATTGACAGAGGACTCGAATGAGCAGCCAGACAGTCT
TGTGGACCACAATAAACTAAATTCTGAAGCCTCTCCCTCCAGGGAGGCAATAAATGGCCAGCGAGAAGACACTGG
GGATCAGCAGGGGTGTGTTGAAGGCCATTGAGAACGACAAGTTGGCATTTCCTGGAGAGACCCTTTCAGACATTCC
TTGCAAAACAGAGGAGGAGGGTGTGGCTGTGGAGGTGCAGGGAGGAGAGGGGCACTCCAGGAATGTTCCGCCACG
GAGCTGCCCCGAGCTGACGAGTGGCCCCGAGAATGTGCCCCAGAAAGGAGCAGGACAGTTGGAGTGAAGCTGGGGG
CATCCTGTTCAAAGGGGAAGGTGCCTATGGTGGTCTTGCAGGACATCTTGGCTGTGAGACCACCGCAAAATCAAGTC
CCTTCCAGCCACACCCCCAAGGCAAGAACATGACCCCTGAGAGTGAGGTGCTGGAATCTTTCCCCGAAGAAGACTC
TGTA CT CAGCCATTTCGTCCCTGAGCTCTCCCTCTTCCACCAGCTCGCCCGAGGGGCCGCTGCTCCCCCAAAGCA
GCACAGCAGTACCAGTCCCTTCCCCACCTCCACGCCCCCTCCGAGAATAACTAAGAAATTCGTCAAAGGCTCTAC
AGAGAAGAACAAGCTCAGACTGCAAAGAGATCAGGAGCGTCTGGGCAAGCAGCTCAAGTTACGTGCAGAAAGGGA
AGAAAAGGAGAAGCTGAAAGAGGAGGCCAAGCGGGCCAAGGAGGAGGCCAAGAAGAAGAAGGAGGAAGAGAAGGA
GCTTAAGGAAAAGGAGAGGCGGGAGAAGCGGGAGAAGGATGAGAAGGAGAAGGCGGAGAAGCAGCGGCTCAAGGA
GGAGCGGCGCAAGGAGAGACAGGAAGCCCTGGAGGCTAAACTTGAGGAAAAAAGGAAAAAGGAAGAAGAGAAACG
GTTAAGAGAAGAAGAGAAGCGCATTAAAGCAGAGAAGGCCGAAATCACGAGGTTCTTCCAGAAACCAAAGACTCC
ACAGGCCCCCAAGACCCTGGCCGGCTCCTGTGGGAAGTTTGCCCCCTTTGAAATTAAGAGCACATGGTCTCTGGC
CCCTCGGCGTCGGACCGCTTTCATCCAGACCTCTGCAGTCAGCTGGACCAGCTCCTCCAGCAGCAGAGCGGCGA
GTTCTCCTTCTTGAAAGACCTCAAAGGCCGGCAGCCCCTGAGGTCCGGACCCACGCACGTTTCCACCCGGAATGC
AGATATTTTTTAACAGTGATGTCGTCATCGTGGAGCGTGGGAAGGGCGACGGTGTTCGAGAGGAGGAAGTTTGG
CAGGATGAAGCTCCTGCAGTTCTGTGAGAACCACCGCCTGCCTACTGGGGTACCTGGAATAAGAAGACGGCACT
CATCCGCGCGGAGACCCCTGGGCCCAGGACACGAAGCTCCTGGACTATGAGGTGGACAGTGATGAGGAGTGGGA
AGAAGAGGAGCCTGGGGAGTCCCTGTCCACAGTGAGGGGGATGATGATGACGACATGGGAGAGGATGAAGATGA
GGACGATGGTTTCTTTGTGCCCCATGGGTACCTGTCTGAGGACGAAGGTGTGACAGAGGAGTGTGCCGACCCTGA
GAACCATAAGGTCCGCCAGAACTGAAGGCCAAGGAGTGGGACGAGTTCTTGCTAAGGGGAAGCGCTTTCGCGT
CCTGCAACCTGTGAAGATCGGCTGCGTGTGGGCGGCTGACAGAGACTGCGCAGGCGATGACCTGAAGGTACTGCA
GCAGTTTCGACAGCCTGCTTCTGGAGACCCTGCCGGCCCAGGAGGAGCAGACGCCCAAGGCCTCCAAGCGGGAGAG
GAGAGACGAGCAGATCCTGGCCCAGCTGCTGCCGCTCCTGCACGGCAATGTGAACGGGAGCAAGGTATCATCCG
GGAGTTCCAGGAGCACTGCCGCCGGGGACTGCTCAGCAACCACACCGGCAGCCCGCGGACGCCCTCCACCACCTA
CCTGCACACCCCCACCCCCAGCGAGGATGCCGCCATCCCCCTCTAAGTCCCGGCTCAAGCGGCTCATTTCGAGAA
CTCAGTGTATGAGAAGCGGCCTGACTTCAGGATGTGCTGGTACGTGCACCCGCGAGGTGCTACAGAGCTTCCAGCA
GGAGCACCTGCCCGTGCCGTGCCAGTGGAGCTATGTGACATCGGTGCCCTCGGCCCCCAAAGAGGACAGTGGCAG
CGTCCCCCTCCACGGGGCCAGCCAGGGCACTCCCATCTCGCTGAAGAGGAAGTCAGCGGGCAGCATGTGCATCAC
CCAATTCATGAAGAAGCGCAGGCACGACGGCCAGATTGGTGTGTAAGACATGGACGGCTTCCAGGCAGACACGGA
GGAGGAGGAAGAGGAGGAGGGCGACTGTATGATCGTGGATGTCCCGGATGCTGTGGAGGTCCAAGCCCCGTGTGG
AGCCGCTTCCGGAGCTGGGGGTGGTGTGGGGGTGGACACCGGCAAGGCCACCCTGACCGCGAGCCCACTGGGTGC
ATCCTGAAGCAGGGGTGACGTATGTAGAACGCTTAGGGTGTCTCCCCACAGAGCAGATACTTGAACCGACTCA
ATTCTGTGTAAAGAGCACTTTGTCTGCTTACGGACCTCCCCAAAGTGTGCAGAGTTCTATATAGGATGCTGG
ATTAGTTCCTTTGATATTTGTAAAAATCCCCCAAGAGCCGCATATGAATCTGCCCTTTAATAAAGCATTATTGA
GATTGCTGGCCTATTGGGGAAGCTGCGGGCACAGGA

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FIGURE 351

MDCKDRPAFPVKKLIQARLPFKRLNLVPGKGADDMSDDQGTSVQSKSPDLEASLDTLENNCHVGSDIDFRPKLVN
GKGPLDNFLRNRIETSIGQSTVIIDLTEDSNEQPDSDLVDHNKLNSEASPSREAINQREDTGDQQGLLKAIQNDK
LAFPGETLSDIPCKTEEEGVGCGGAGRRGDSQECSPRSCPELTSGPRMCPRKEQDSWSEAGGILFKGKVPVVVLQ
DILAVRPPQIKSLPATPQGKNMTPSEVLESFPEEDSVLSHSSLSSPSSTSSPEGPPAPPKQHSSTSPFPTSTPL
RRITKKFVKGSTEKNKLRQLQDQERLGKQLKLRAEREEKEKLKEEAKRAKEEAKKKKEEKEKELKEKERREKREKD
EKEKAQKQLKEERRKERQEALEAKLEEKRKKEEELRLREEEKRIKAEKAEITRFFQKPKTPQAPKTLAGSCGKF
APFEIKEHMLAPRRRTAFHPDLCSQLDQLLQQQSSEFSFLKDLKGRQPLRSGPTHVSTRNADIFNSDVVIVERG
KGDGVPERRKFGRMKLLQFCENHRPAYWGTWNKKTALIRARDPWAQDTKLLDYEVDSDDEEEEEEPGESLSHSEG
DDDDMGEDEDEDDGFFVPHGYLSEDEGVTEECADPENHKVRQKLKAKEWDEFLAKGKRFRVLQPVKIGCVWAAD
RDCAGDDLKVLQQFAACFLETLPAQEEQTPKASKRERRDEQILAQLLPLLHGNVNGSKVIREFQEHCRRLSN
HTGSPRTPSTTYLHTPTPSEDAAIPSKSRLKRLISENSVYEKRPDFRMCWYVHPQVLQSFQQEHLVPVCQWSYVT
SVPSAPKEDSGSVPTGSPSQGTPISLKRKSAGSMCITQFMKKRRHDGQIGAEDMDGFGQADTEEEEEEEGDCMIVD
VPDAVEVQAPCGAASGAGGGVGVDTGKATLTASPLGAS

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FIGURE 352

GCAGTTCAGACCCCCACACCCATCAAAGAGCCGCTCCTCCCCCGCAGGCGCCTTCGCCGCTCCCTCCCTT
CCTTTCCTTTCCGCTCCTCTTCCGACCTGTCCACCCGGGAGGAAGGGAGCTGGAAGGGGGCGGAAACCTCTCCC
CTCAAAAAGCACAAACAACTGTTTTCAGTGCAGGAGGAGCCGGGTTTCGCCCTGCCGGACAGCGGGGGGCTTTGTT
CCCCGAGTTGTTTCTGCCCATTGACCTGTCTAGCTGCTGGGGAAACGCTGCTGTTGACCTTTGGTTGAACTGC
TAAGGCGATTTTGCTGATTTTTCTTTCTTTTTCCGCGAGGGCTGTCTTTTGCTCCTCCAAATGAGCCAGTCCCC
CTCCCTTCTCCCCAAAGCGCTCCAAGAGAAAGTGCCAGGAAGGGGCTTGTCGCCGAAGGCCTGGCGGCTGAGCGG
GGCCAGGTCTTGTTAGGCCACCAGGGTGGGCGTCCGCGCCATTGTTTGAGCTTGTCGGCGCTGGTGGGAGAGAT
GAGGGCAATTCCTCTGGGACGCAAGTCCCCTCGAATGGCCGGGGCTGGCCGGGATGTTCCCCGCACGGCGCTGCC
CTCGAGTCCCCCGATGGAGAGCGCGGGCGCGCTTCTTCGCTGGCGTCCAAACCCGGGACCAGCTAGAACACA
GCAGGGCTGGGACTGGGTTCCAGCCCCACGTGGAGTCTGGATTGTTTTGTTGTGTTTTGCTTTCTTCTTGGAA
GAAATCCCGAGGGGACCGCCCTAGAGCGGCAGCTCCAGGACCTCGGCCCTTGGGCTTCCGGGGGTGCAGCCACTT
AGGCCCCGCTCCCGGGGAGAGAGGGATTATTTTTTAAGATTTATCCCCAGGGCGCGCGGCATTTCCTGTCCCTC
GTGAATCCCGTTGAGAGTCTCCCTCCCCAACCTCCTCCATTCCCCAGCCAGACCGATTTCGAGAGCCCTGGAGA
TTCTGGGCGAGGCTAGTGACTGGGTAGTACAGGCCTCTAGCCCCACCATTGCTCTCTGTCTTTCAGTTCCCCAG
GAGGGCAATGGCATCAAACAGCACAGCTCTGGGGGATGTCAATATTGCATACCTTTTCTACCTAAAGGGAAAATG
ACTCGCTTTTCTGCTTGCAAATATGGTAGTTTCTGCTTACAAATGTAATACAATGCCCATGACAGCCAAGGACTG
GAAGCATAAGTTGCTAGGTCTTACAGGTGATTTTTTACAATGAAGCAAACCTCACTATGTTAGACACCATTACAT
TGGATGTCTCCAACATAACAAAGTAACATAAGACAGATGTAGGTGTAAATTGAGAGTGAAATTTGACCCTTTGA
CCGTCACAACTTCTTGGGCTTATCTTGGGTGCTTATAGGAGAGGTGGGCTCCACCACAAAAATGGACTGCTCA
GAAAAATGAGGGAGAGAGAAAGGGTGGCCACTTTCCCGAGCCAAGAAATTCCTTGAAAAAAATCAGAACATCTG
AAACCAGAGAGCCGATTTCCTTACCGGGAGGCAGTTCCTGGCTAACGAAGAGGAAGCACGATGGAAGAAAAGTT
CACTCCAACGGAAGCCAGTTTGCTGAACATAGCAGATCGCCCAGGAGGACTGGGAGAGACTGCAAACAGTTTGA
GCCCCCAGCATGGCGTTAGGTGTCAGCCAGCTGGCAGGAAGGTCCAGGTGTCTGTGTTTTCAGAGTCTCAAGGCGGC
TATGAGAGGTTTTCTCCGAGTACCCAGAATTCTGTCTAAAACCAAGGCCCTGGCAGCCATCCCACCCCGGTT
CCCCCAGTGCCACAGAGCCCTTGGACCTGGGCTGCAGCTCCTGTGGGACCCCACTACACGACCAGGGGGGTCTCT
GTGGAGATCCTTCCCTTCTCTACCTCGGCAGTGCTACCATGCTGCCCGGAGAGACATGCTGGACGCCCTGGGC
ATCACGGCTCTGTTGAATGTCTCTCGGACTGCCCAAACCACTTTGAAGGACACTATCAGTACAAGTGCATCCCA
GTGGAAGATAACCACAAGGCCGACATCAGCTCCTGGTTTCATGGAAGCCATAGAGTACATCGATGCCGTGAAGGAC
TGCCGTGGGCGCGTGTCTGGTGCAGTGCAGGCGGGCATCTCGCGGTGGGCCACCATCTGCCTGGCCTACCTGATG
ATGAAGAAACGGGTGAGGCTGGAGGAGGCCTTCGAGTTCGTTAAGCAGCGCCGAGCATCATCTCGCCCAACTTC
AGCTTCATGGGGCAGCTGCTGCAGTTCGAGTCCCAGGTGCTGGCCACGTCTGTGCTGCGGAGGCTGCTAGCCCC
TCGGGACCCCTGCGGGAGCGGGGCAAGACCCCCGCCACCCCACTCGCAGTTCGTCTTCAGCTTTCCGGTCTCC
GTGGGCGTGCAGTCCGCCCCCAGCAGCCTGCCCTACCTGCACAGCCCCATCACCACCTCTCCCAGCTGTTAGAGC
CGCCCTGGGGGCCCCAGAACCAGAGCTGGCTCCCAGCAAGGGTAGGACGGGCGCATGCGGGCAGAAAGTTGGGA
CTGAGCAGCTGGGAGCAGGCGACCGAGCTCCTTCCCCATCATTTCTCCTTGGCCAACGACGAGGCCAGCCAGAAT
GGCAATAAGGACTCCGAATACATAATAAAAGCAAACAGAACCTCCAACCTTAGAGCAATAACGGCTGCCGCAGCA
GCCAGGGAAGACCTTGGTTTGGTTTATGTGTCTAGTTTCACTTTTCCGATAGAAATTTCTTACCTCATTTTTTAA
GCAGTAAGGCTTGAAGTGATGAAACCCACAGATCCTAGCAAATGTGCCCAACCAGCTTTACTAAAGGGGGAGGAA
GGGAGGGCAAAGGGATGAGAAGACAAGTTTCCAGAAAGTGCTGTTCTGTGTACTTGTCCCTTGTGTGCTG
TTGTAGTTAAAGGAATTTCATTTTTTAAAGAAATCTTCGAAGGTGTGGTTTTCTTCTCAGTCACCAACAGAT
GAATAATTATGCTTAATAATAAAGTATTTATTAAGACTTTCTTCAGAGTATGAAAGTACAAAAGTCTAGTTACA
GTGGATTAGAAATATATTTATGTTGATGTCAAACAGCTGAGCACCGTAGCATGCAGATGTCAAGGCAGTTAGGAA
GTAATGGTGTCTTGTAGATATGTGCAAGGTAGCATGATGAGCAACTTGAGTTTGTGGCACTGAGAAGCAGGCG
GGTTGGGTGGGAGGAGGAAGAAAGGGAAGAATTAGGTTGAATTGCTTTTTAAAAAAAAGAAAAGAAAAGAC
AGCATCTCACTATGTTGCCAAGGCTCATCTTGAGAAGCAGGCGGGTGGGTGGGAGGAGGAAGAAAGGGAAGAAT
TAGGTTTGAATTGCTTTTTTAAAAAAA

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FIGURE 353

MGRKVHSNGSQFAEHSRSPRRRTGRDCKPVRAPSMALGVSQLAGRSRCLCSESQGGYERFSSEYPEFCSKTKALAA
IPPPVPPSATEPLDLGCSSCGTPLHDQGGPVEILPFLYLGSAYHAARRDMLDALGITALLNVSSDCPNHFEGHYQ
YKCIPVEDNHKADISSWFMEAIEYIDAVKDCRGRVLVHCQAGISRSATICLAYLMMKKRVRLEEAFEFVKQRRSI
ISPNF SFGQLLQFESQVLATSCAAEAASPSGPLRERGKTPATPTSQFVFSFPVSVGVSAPSSLPYLHSPITTS
PSC

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FIGURE 354

CTGCCATTTAGGACAAGCTGGATGATGATGGTTTGTATAGCTCCAGGGGTTTCGTGTATAGGAGATGATGAATCTGC
TTCATCCAGAATCACAATCTTAAAAGGCGGGAAGCTGAGGCGACTGTGGGGACATCAGTGATCGTAAGTCTCCTGG
GCCCCGTTATTCTCAGATTAGGTGACGGAGCTAAGACTTCGAGACCATCTCGTCCTTTTTGTATCGCGGAAACCTG
AGGAACGAGCCGGCGGGTGACCTGCACGAGAAGCCAGGCTAACTGGGTGAAGTACCATGCAAGCATTTCTTAA
AGGTACATCCATCAGTACTAAACCCCGCTGACCAAGGATCGAGGAGTAGCTGCCAGTGCGGGGAAGTAGCGGAGA
GAACAAGAAAGCCAAACCCGTTCCCTGGGTGGAATAATATCGCCCAAATGTGTGGATGAAGTTGCTTTCAGGA
AGAAGTGGTTGCAGTGCTGAAAAATCTTTAGAAGGAGCAGATCTTCCTAATCTCTTGTTTTACGGACCACCTGG
AACTGGAAAAACATCCACTATTTTGGCAGCAGCTAGAGAACTCTTTGGGCCTGAACTTTTCCGATTAAGAGTTCT
TGAGTTAAATGCATCTGATGAACGTGGAATACAAGTAGTTCGAGAGAAAGTGAAAAATTTTGCTCAATTAAGTGT
GTCAGGAAGTCGCTCAGATGGGAAGCCGTGTCCGCCTTTTAAGATTGTGATTCTGGATGAAGCAGATTCTATGAC
CTCAGCTGCTCAGGCAGCTTTAAGACGTACCATGGAGAAGGAGTCGAAAACCAACCCGATTCTGTCTTATCTGTAA
CTATGTCAAGTCGAATAATTGAACCCCTGACCTCTAGATGTTCAAAATTCCGCTTCAAGCCTCTGTCAGATAAAAT
TCAACAGCAGCGATTACTAGACATTGCCAAGAAGGAAAATGTCAAAATTAGTGATGAGGGAATAGCTTATCTTGT
TAAAGTGTCAAGAGGAGACTTAAGAAAAGCCATTACATTTCTTCAAAGCGCTACTCGATTAAACAGGTGGAAAGGA
GATCACAGAGAAAAGTGATTACAGACATTGCTGGGGTAATACCAGCTGAGAAAATTGATGGAGTATTTGCTGCCTG
TCAGAGTGGCTCTTTTGACAACTAGAAGCTGTGGTCAAGGATTTAATAGATGAGGGTCATGCAGCAACTCAGCT
CGTCAATCAACTCCATGATGTGGTTGTAGAAAATAACTTATCTGATAAACAGAAGTCTATTATCACAGAAAACT
TGCCGAAGTTGACAAATGCCTAGCAGATGGTGCTGATGAACATTTGCAACTCATCAGCCTTTGTGCAACTGTGAT
GCAGCAGTTATCTCAGAATTGTTAACGTGATATATCTGGATGGGGGGTTTTGTAAATAATGAAGTTGTAATAAAA
ATAAAATGACCAAAGCACCG

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FIGURE 355

MQAFLKGT SISTKPPLTKDRGVAASAGSSGENKKAKPVPWVEKYRPKCVDEVAFQEEVVAVLKKSLEGADLPNLL
FYGPPGTGKTSTILAAARELFGPELFRRLRVLELNASDERGIQVVREKVKNFQQLTVSGSRSDGKPCPPFKIVILD
EADSMTSAAQAALRRIMEKESKTTRFCLICNYVSRIIEPLTSRCSKFRFKPLSDKIQQQRLLDIKKENVKISDE
GIAYLVKVSEGDRLKAITFLQSATRLTGGKEITEKVITDIAGVIPAEKIDGVFAACQSGSFDKLEAVVKDLIDEG
HAATQLVNQLHDVVVENNLSDKQKSIITEKLAEVDKCLADGADEHLQLISLCATVMQQLSQNC

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FIGURE 356

GGCACGAGCTCGGCTCCTGGAAAGATGGAGGCAGCGGAGACAGAGGCGGAAGCTGCAGCCCTAGAGGTCCTGGCT
GAGGTGGCAGGCATCTTGGAACCTGTAGGCCTGCAGGAGGAGGCAGAACTGCCAGCCAAGATCCTGGTTGAGTTT
GTGGTGGACTCTCAGAAGAAAGACAAGCTGCTCTGCAGCCAGCTTCAGGTAGCGGATTTCTGCAGAACATCCTG
GCTCAGGAGGACACTGCTAAGGGTCTCGACCCCTTGGCTTCTGAAGACACGAGCCGACAGAAGGCAATTGCAGCT
AAGGAACAATGGAAAGAGCTGAAGGCCACCTACAGGGAGCACGTAGAGGCCATCAAAATTGGCCTCACCAAGGCC
CTGACTCAGATGGAGGAAGCCCAGAGGAAACGGACACAACCTCCGGGAAGCCTTTGAGCAGCTCCAGGCCAAGAAA
CAAATGGCCATGGAGAAACGCAGAGCAGTCCAGAACCAGTGGCAGCTACAACAGGAGAAGCATCTGCAGCATCTG
GCGGAGGTTTCTGCAGAGGTGAGGGAGCGTAAGACAGGGACTCAGCAGGAGCTTGACAGGGTGTTCAGAACTT
GGAAACCTGAAGCAGCAGGCAGAACAGGAGCGGGACAAGCTGCAGAGGTATCAGACCTTCTCCAGCTTCTGTAT
ACCCTGCAGGGTAAGCTGTTGTTCCCTGAGGCTGAGGCTGAGGCAGAGAATCTTCCAGATGATAAACCCAGCAG
CCGACTCGACCCCAGGAGCAGAGTACAGGAGACACCATGGGGAGAGACCCCTGGTGTGTCTTCAAGGCTGTTGGT
CTACAACCTGCTGGAGATGTAAATTTGCCATGACTTTCCTGGAGGACAGCAGCATGGAGAAAGATCCTAGAAAAGG
CCTCTGACTTCCCTCACCTCCCAACCATCATTACAGGAAAGACTGTGAACTCCTGAGTTCAGCTTGATTTCTGAC
TACATCCCAGCAAGCTCTGGCATCTGTGGATTAAATCCCTGGATCTCTCTCAGTTGTGTATTTGTTCACTTCA
TATGCTGGCAGGAACAACCTATTAATACAGATACTCAGAAGCCAATAACATGACAGGAGCTGGGACTGGTTTGAAC
ACAGGGTGTGCAGATGGGGAGGGGGTACTGGCCTTGGGCCTCCTATGATGCAGACATGGTGAATTTAATTCAAGG
AGGAGGAGAATGTTTTAGGCAGGTGGTTATATGTGGGAAGATAATTTTATTCATGGATCCAAATGTTTGTTGAGT
CCTTTCTTTGTGCTAAGGTTCTTGCGGTGAACCAGAATTATAACAGTGAGCTCATCTGACTGTTTTAGGATGTAC
AGCCTAGTGTTAACATTCTTGGTATCTTTTTGTGCCTTATCTAAACATTTCTCGATCACTGGTTTCAGATGTTT
ATTTATTATATTCTTTTCAAAGATTACAGAGATTGGCTTTTGTGCATCCACTATTGTATGTTTTGTTTCATTGACCT
CTAGTGATACCTTGATCTTTCCCACTTTCTGTTTTCGGATTGGAGAAGATGTACCTTTTTTGTCAACTCTTACTT
TTATCAGATGATCAACTCACGTATTTGGATCTTTATTTGTTTTCTCAAATAAATATTTAAGGTTAAAAAAAAAA
AAAAAAA

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FIGURE 357

MEAAETEAEAAALEVLAEVAGILEPVGLQEEAELPAKILVEFVVD SQKKDKLLCSQLQVADFLQNILAQEDTAKG
LDPLASEDTSRQKAIAAKEQWKELKATYREHVEAIKIGLTKALTQMEEAQRKRTQLREAFEQLQAKKQMAMEKRR
AVQNQWOLQQEKHLQHLAEVSAEVRERKTGTQQELDRVFQKLGNLKQQAEOERDKLQRYQTFLQLLYTLQGKLLF
PEAEAEAENLPDDKPQQPTRPQEQSTGDTMGRDPGVSFKA VGLQ PAGDVNLP

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FIGURE 358

CCTTCAGCATAAAAAGCTGATCCACAAACAAGAGGAGCACCAGACCTCCTCTTGGCTTCGAGATGGCTTCGCCACA
CCAAGAGCCCAAACCTGGAGACCTGATTGAGATTTTCCGCCTTGGCTATGAGCACTGGGCCCTGTATATAGGAGA
TGGCTACGTGATCCATCTGGCTCCTCCAAGTGAGTACCCCGGGGCTGGCTCCTCCAGTGCTTCTCAGTCCTGAG
CAACAGTGCAGAGGTGAAACGGGGGCGCCTGGAAGATGTGGTGGGAGGCTGTTGCTATCGGGTCAACAACAGCTT
GGACCATGAGTACCAACCACGGCCCGTGGAGGTGATCATCAGTTCTGCGAAGGAGATGGTTGGTCAGAAGATGAA
GTACAGTATTGTGAGCAGGAACGTGAGCACTTTGTCGCCCAGCTGAGATATGGCAAGTCCCGCTGTAAACAGGT
GGAAAAGGCCAAGGTTGAAGTCGGTGTGGCCACGGCGCTTGGAATCCTGGTTGTTGCTGGATGCTCTTTTGCGAT
TAGGAGATACCAAAAAAAGCAACAGCCTGAAGCAGCCACAAAATCCTGTGTTAGAAGCAGCTGTGGGGGTCCCA
GTGGAGATGAGCCTCCCCCATGCCTCCAGCAGCCTGACCCTCGTGCCCTGTCTCAGGCGTTCTCTAGATCCTTTC
CTCTGTTTCCCTCTCTCGCTGGCAAAAGTATGATCTAATTGAAACAAGACTGAAGGATCAATAAACAGCCATCTG
CCCCTTCAAAAAAAAAA

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FIGURE 359

MASPHQEPKPGDLIEIFRLGYEHWALYIGDGYVIHLAPPSEYPGAGSSSVFSVLSNSAEVKRGRLEDVVGGCCYR
VNNSLDHEYQPRPVEVI ISSAKEMVGQMKYSIVSRNCEHFVAQLRYGKSRCKQVEKAKVEVGVATALGILVVAG
CSFAIRRYQKKATA

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FIGURE 360A

AGGGGGCGGCGCTCCCGGCCCATCCCTTAGCCCCGCGGCGGCGCTGTGGGCCGGAGGCTGCCTGCACCGCGTCAG
GGAGGCCGGCCTAGAAACCTCCCTCCCAGAAGAAAGCCGATCCCAGTTCAGGTGGGGTCTTCTCGGTTGCGTA
CCTGGCTGGAGCCGAGCTGGTGGGCGGCCGGCAGCCGGCGTTTCTGGTGATGACAGCCCCGAAATGAAAGCAGCG
CGGCCGCCGCTCCGAGGGCTGCAGGGAGATCAGCGTCCAGCAAATAAGAAGCAAGTCTGGACCCGGAGGAGGA
GGAGCGGCCGAGCATCTCTCTCTGCTCCGCCGTGTCTTTAGATGAGCACTCCCGGCCGGAGCCGGAGGTGGATC
CGCAGAGCTGCCTCTGGGCGCCTGACCCCGCGCTGACATCACAACTGTGACAGGCGCATCACGCCCGGTACCTG
CTCCCGGCCGCTGCCCGTCTCTCCAGCCTCTTTGTATGCCGAGACATGGCCAGCCAGCAGGATTCTGGGCTTCTT
TGAGATCAGTATCAAATATTTACTGAAATCCTGGAGTAATACTTCTCCCGTTGGCAACGGTTACATCAAGCCTCC
GGTTCCACCTGCTTCTGGCACGCACAGGGAGAAAGGGCCGCCAACCATGCTACCCATCAATGTGGACCCAGACAG
TAAACCAGGAGAATATGTCCTCAAAAGTTTATTTGTCAACTTCACCACCTCAGGCTGAACGCAAGATTCTGTATCAT
TATGGCAGAGCCCCGGAAGCCATTGACGAAATCTCTGCAACGTGGAGAAGACCCCCAATTTGATCAGGTCAT
CAGCTCAATGAGCTCCCTTTCTGAGTACTGCCTGCCTTCCATTCTACGTACATTATTTGACTGGTATAAAAGGCA
AAATGGCATTGAGGATGAATCACATGAATACAGACCAAGAACAAGCAATAAATCAAAAAGCGATGAACAACAGCG
AGATTATTTAATGGAAGACGGGACCTCGCCATTGATTTTATTTTTCTTTAGTATTAATAGAAGTTTGTAAACA
GATTCACCTTCATCCTGTAATAGACAGTTTAATACATGATGTTATTAAGTGGCTTTCAAGCACTTTAAATACAA
AGAAGGGTACCTTGGTCCCAACACTGGCAATATGCATATTGTGGCAGACCTGTATGCAGAAGTCATTGGAGTGTT
GGCACAAGCCAAATTCCCTGCTGTAAAGAAGAAATTTATGGCGGAGCTAAAAGAATTACGGCACAAAGAGCAGAA
CCCATATGTGGTTCAAAGCATTATCAGCTTAATAATGGGCATGAAATCTTTTGAATTAAGATGTATCCAGTGGA
GGATTTTGAGGCCTCTCTTCAGTTTATGCAGGAATGTGCACATTACTTCTCGAGGTCAAAGACAAAGATATCAA
GCATGCCCTTGGCTGGGCTTTTTGTTGAAATACTTGTTCAGTTGCTGCTGCTGTTAAAAATGAAGTAAATGTTCC
CTGCCCTAGAAATTTTGTGGAAAGCCTGTATGACACCACGCTGGAACCTTCTTCTCGAAAGAAGCATTCTTGGC
CTTGTAACCCCTGGTGACCTGTTTGTCTGTGTGTCAGTCAGAAGCAGCTGTTTCTGAACAGGTGGCACATTTTCT
CAACAACCTGCTTGTCCAACCTTAAAAACAAAGATCCCAAGATGGCTCGAGTTGCACTGGAATCTCTCTACAGATT
ACTTTGGGTTTACATGATTCTGAATTAATGTGAAAGCAACACAGCTACTCAGAGCCGACTTATAACCATCATCAC
AACACTTTTCCCCAAAGGGTCCCGCGGTGTGGTACCAAGGGACATGCCTCTGAACATCTTTGTGAAAATCATCCA
GTTCAATTGCCCAGGAACGTTTAGATTTTGAATGAAAGAAATCATTTTTCGATTTTCTTTGTGTGGGAAAACCAGC
AAAAGCATTCACTCTCAACCCAGAGAGAATGAACATTGGTTTACGGGCATTCTTGGTCATAGCTGATAGCTTGCA
GCAGAAAGATGGGGAACCTCCCATGCCGTTACAGGAGCCGTTTCTTCTCAGGAAACACGTTAAGAGTAAAGAA
AACATATTTGAGTAAACACTAACTGAAGAGGAAGCCAAAATGATAGGCATGTCCTTATATTACTCTCAAGTACG
AAAAGCTGTAGACAACATTTTAAGGCACCTTGATAAAGAAGTAGGAAGGTGTATGATGCTGACTAATGTACAGAT
GTTAAACAAAGAACCAGGAGACATGATCAGGGGTGAGAGAAAGCCAAAAATAGATCTTTTCAGGACCTGTGTTGC
TGCTATTCTCGACTGCTTCTGATGGGATGTCAAACTTGAACCTTATTGACTTACTGGCTAGGCTCTCTATTCA
TATGGATGATGAATTGCGACATATTGCACAAAATCTCTTCAGGGTTTACTTGTGACTTCTCAGATTGGAGGGA
AGATGTACTATTTGGCTTTACCAACTTCTGCTCCGGGAAGTAAATGATATGCATCACACACTCCTTGATTCTGTC
CCTGAAGTTGCTGCTGCAGCTGCTCAGGAGTGGAACTAGTCATCCAGACACAAGGAAAAGTCTATGAACAAGC
CAACAAAATCAGAAATTCAGAGCTCATCGCAAATGGCTCCAGTCACAGAATTTCAGTCGGAACGAGGTCCCCACTG
CAGTGTAATCCACGCTGTAGAAGGTTTTGCTCTGGTTTTACTCTGCAGTTTCCAGGTGGCCACACGCAAACCTGTC
CGTTTTAATACTCAAGGAAATTCGAGCGTTGTTTTATTGCCCTGGGGCAGCCTGAGGATGACGACAGGCCGATGAT
TGATGTATGATGATCAGCTAAGTTCTTCCATTCTAGAAAGTTTTATTTCATGTAGCAGTTTTCGGATTTCAGCAACATT
ACCACTCAGCCACAATGTGGATCTGCAGTGGTTGGTGGAAATGGAACGCAGTCTGGTCAATAGCCATTATGATGT
GAAAAGCCCTTCCCATGTCTGGATATTTGCACAGTCTGTCAAAGACCCCTGGGTCTCTGCTCTTTCAGCTTCTCT
CCGGCAGGAGAACTTACCCAAGCACTGCCCCACAGCCCTCAGCTATGCCTGGCCTTATGCCTTCACTCGGCTCCA
GTCGGTGATGCCTCTGGTGGACCCAAATAGCCCAATTAATGCCAAGAAAACCAGCACTGCCGGCAGCGGAGACAA
CTATGTTACTTTGTGGAGAAATTACCTAATCTTTGTTTTGGAGTTGCAAAACCCAGTATTATGAGCCAGGACA
CTTAAGAGCTTCCACTCCAGAAATAATGGCGACCACACCTGATGGTACAGTGAGCTACGATAACAAGGCCATAGG
CAGGATCTGGTGGGAGTTCTGTTAAAGCAGTTGGTGCCTTTGATGAGACTAGAGAGCATTGAGATCACAGAGTC
CTTAGTTTTAGGATTTGGAAGAACAAATCCCTTGTTTTAGAGAATTGGTAGAAGAACTTCATCCATTAATGAA
AGAAGCTCTGGAAGAAGACCAGAGAACAAAGAAACGCCGAGAACGGCGAGACTTGTTAAGGCTACAACACTCTCG

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FIGURE 360B

AATTTTGAACTTTGGCTGATGCTGGTGTAAATAAGTGACAGCACAAATGGAGCCCTAGAGCGGGATACTTTAGC
CCTGGGAGCTTTGTTCTTAGAATATGTGGACTTGACCCGCATGCTCCTAGAAAGCTGAAAATGACAAAGAAGTTGA
AATTCTTAAAGATATCCGGGCACATTTTAGTGCAATGGTGGCCAACTTGATTCAGTGTGTTCCAGTTCACCACCG
AAGATTTCTCTCCCCCAGCAAAGTCTGAGGCACCACCTTTTCATCTTATTCAGCCAGTGGGCAGGACCCTTCAG
CATTATGTTCACTCCTCTGGATCGTTACAGTGACAGAAATCATCAGATTACAAGATATCAGTATTGTGCATTAAA
AGCAATGTCAGCAGTACTGTGCTGTGGCCCTGTCTTTGACAATGTGGGCCTTTCCCCAGATGGCTACCTATATAA
ATGGCTTGACAACATTCTGGCTGTCAAGATTTACGAGTTCATCAACTTGGCTGCGAAGTTGTTGTCTTGCTACT
GGAACCTTAATCCTGACCAAATAAATCTTTTTAACTGGGCAATTGACCGATGCTACACAGGTTTCTACCAACTTGC
ATCTGGCTGCTTCAAAGCCATAGCAACTGTGTGTGGAAGCAGGAACCTATCCCTTCGACATAGTGACATTGTTAAA
CCTTGTTCTATTCAAGGCCTCTGACACCAACAGAGAGATTTATGAAATCTCCATGCAGCTCATGCAGATCCTTGA
AGCAAAGCTTTTTGTATACTCAAAGAAAGTCGCTGAGCAAAGACCGGGAAGTATTCTCTATGGAACACACGGCCC
GCTGCCACCCCTCTACAGCGTGTCACTCGCCCTCTTGTCATGTGAGCTGGCCAGGATGTACCCTGAGCTCACACT
CCCCCTCTCTCAGGTAAGCCAGCGATTCCCCACAACACACCCCCAACGGGCGCCAGATCATGCTTACCTACCTGC
TGCCCTGGCTGCACAACATCGAGCTGGTGGACAGCAGGCTCCTCCTCCGGGTCGAGCCCCAGCAGCCCAGAGGA
CGAAGTCAAGGACCGGGAAGGTGACGTGACTGCTTCTACGGGCTGAGAGGAAATGGCTGGGGCTCTCCAGAAGC
CACGTCACTGGTCTGAACAACCTCATGTACATGACGGCCAAGTATGGAGATGAAGTTCCTGGGCCAGAAATGGA
AAATGCTTGGAATGCTTTAGCCAACAATGAGAAATGGAGCAACAACCTGAGGATCACCTTGAGTTCTTGATTAG
CCTCTGTGGGGTCAGCAGCGACACAGTTCTCCTACCCTATATTAAGGAGTGGCAATATACTTGTGCCGTAACAA
CACCATTCAAACCATGGAAGAGCTTCTCTTTGAGCTGCAGCAGACAGAACCCGTGAACCCCATCGTCCAGCATTG
TGACAACCCGCCCTTCTACCGCTTACGGCCAGTAGCAAGGCTTCCGCAGCAGCCTCAGGAACCACCTCTAGCAG
CAATACAGTGGTTGCTGGCCAGGAAAATTTCCAGATGCTGAGGAGAACAAAGATATTGAAAGAATCTGATGAAAG
GTTTAGTAATGTCATCAGAGCCACACTCGCCTCGAGTCAAGATACAGCAATAGCTCTGGAGGATCCTACGATGA
AGATAAAAATGATCCAATTTCTCCTACACGGGCTGGTTGCTGACTATTACAGAGACCAAGCAGCCGCAGCCCTT
ACCGATGCCTTGTAAGGATGCTGGGCCCCCTGGTTGACTATCTCCCGGAGACCATCACTCCCCGGGGGCC
ACTCCACAGGTGCAATATTGCTGTAATTTTATGACTGAAATGGTGGTGGATCACAGTGTACGAGAAGACTGGGC
GCTTCATCTACCATTATTACTTCATGCTGTCTTCTTAGGTTTAGACCCTACCGGCCTGAAGTCTTTGAACACAG
CAAAAACCTGCTTCTTACCTCTTGATTGCCCTCTCTTGCAACAGCAATTTCCATTCCATTGCTTCCGTGCTCCT
GCAGACCCGAGAGATGGGTGAAGCTAAGACTCTAACCGTGACGCCAGCCTACCAACCTGAATATCTCTATACAGG
TGGCTTTGACTTCTGAGAGAGGACCAGTCATCCCCGGTGCTGACTCAGGGCTTAGTTCAAGCTCCACCTCCTC
TAGCATCAGTCTGGGAGGCAGCAGTGGAAACCTCCCACAGATGACCCAGGAGGTAGAAGATGTGGACACAGCTGC
TGAAACAGATGAGAAGGCAAACAAGCTCATTGAGTTTCTCACGACCAGGGCATTGTTGGTCCACTTTGGTGCCATGA
AGACATCACACCTAAAAATCAAAATTCAAAGAGTGTGAACAGCTCACTAATTTTCTACGTCACGTTGTATCTGT
ATTTAAAGATTCCAAATCAGGCTTCCATCTGGAGCACCAGTTGAGTGAAGTTGCATTGCAGACAGCCCTCGCAAG
CTCTTCAAGGCACTATGCTGGTCCGCTCCTTCCAGATATCCGGGCCCTCAAGCAACCTCTGTCAGCACATGCCTT
ATCTGACCTTCTCTCAAGATTGGTGGAGGTGATAGGAGAACATGGAGATGAGATTGAGGTTATGTAATGGAAGC
GCTCCTAACCTTGAGGCGGCTGTGGATAACTTGTCTGACTGCTTGAAGAACAGTGACCTCCTAACTGTATTGTC
CCGCTCTTCTCACCAGATTTAAGCTCCAGCAGTAACTAACAGCAAGCAGAAAGAGCACAGGACAACCTAAACAT
GAACCCGGGAACCAACAGCGGCAACACCGCAACTGCCGAACGGAGCCGGCATCAACGAAGCTTCTCTGTGCCCAA
GAAGTTTGGTGTCTCGACCGATCCTCTGACCCACCTCGAAGTGCCACACTGGACAGAATTGAGGCTTGACCCA
ACAAGGCCTCTCTCAAAAACAGAAAGCTCATCTCCTTGAAGGACAGTCTCACGGACCCATCCCACATAAACCA
TCCCACCAACCTGCTGGCCACCATATTCTGGGTACAGTGGCCTTGATGGAGTCTGATTTTGAGTTTGAATACTT
AATGGCCTTAAGGCTGTTGAGCAGACTACTGGCACATATGCCACTCGATAAGGCTGAGAACCGAGAAAAGCTTGA
GAAACTCCAGGCACAGCTGAAGTGGGCGGACTTCTCCGGGCTGCAGCAGCTGCTGCTGAAAGGATTACATCCCT
CACCACCACAGACCTGACCCTGCAGCTCTTCACTGTGCTGACACCAGTGTCCAAAATATCCATGGTGGATGCATC
CCACGCTATTGGGTTTCCACTGAATGTCTTGTGTCTCCTGCCTCAGCTGATTTCAGCATTTTGAAAATCCCAATCA
GTTCTGTAAGGATATAGCCGAAAGGATTGCTCAGGTTTGTGTTAGAAGAGAAGAACCCCAAACTTTCAAATCTTGC
ACATGTCTGACTCTTTATAAAACGCACAGCTACACGAGGGACTGTGCCACGTGGGTCAATGTGGTCTGTGCGATA
CCTTCATGAAGCATATGCTGACATTACCTTGAATATGGTTACCTACCTGGCAGAGCTGCTGGAGAAGGGCCTCCC

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FIGURE 360C

TAGTGTGCAGCAGCCCCCTGCTCCAGGTGATCTACAGTCTTCTCAGCTACATGGACCTTTCTGTCGTTCCCTGTCAA
ACAGTTCAATGTGGAAGTTCTGAAGACAATTGAAAAATATGTGCAAAGTGTTCACTGGAGAGAAGCTCTGAATAT
CTTGAAGCTGGTAGTTTCTCGGTGAGCCAGCCTTGTTTTACCTTCATACCAGCACAGTGACCTCTCAAAAATAGA
AATACATCGAGTGTGGACTAGTGCTTCCAAGGAATTACCTGGGAAAACCCTGGACTTCCACTTCGATATTTCCGGA
GACTCCAATCATCGGGAGGCGGTATGATGAGCTGCAGAATTCTTCTGGGCGTGATGGGAAGCCCAGGGCCATGGC
CGTCAACCCGGAGCACATCTTCCACTTCCTCAGGCTCCAACCTCCAACGTCCTTGTTCCAGTGAGCTGGAAAAGGCC
CCAGTATTCTCAGAAGAGAAACAAAAGAGAAGTTGGTACATGTCTTTCTCTGTGTGGCCAAGAAGTAGGATTGAG
CAAAAATCCATCAGTGATTTTTTCATCGTGTGGGGATCTGGATCTGCTTGAGCACCAGACAAGCTTGGTATCTTC
TGAGGACGGTGCCCGAGAGCAGGAGAACATGGATGACACAAACAGCGAGCAGCAGTTTAGAGTCTTCAGAGACTT
CGACTTCCTAGATGTGGAGCTGGAGGATGGAGAGGGTGAGAGTATGGACAATTTCAACTGGGGAGTGCGCAGACG
TTCTCTGGACAGCCTGGATAAGTGTGATATGCAGATTCTGGAGGAGCGCCAACCTGTCAGGAAGCACTCCTAGCCT
GAATAAAATGCACCATGAGGACTCCGATGAATCATCCGAGGAGGAGGACCTCACAGCCAGCCAGATCCTGGAGCA
CTCAGACCTAATCATGACTCTCTCCCCCTCTGAAGAGACGAATCCCATGGAGCTGCTCACCACAGCCTGTGACTC
GACCCCTGCAGAACCTCATTCCTTTAACACCAGAATGTCCAGCTTTGATGCTTCCTTGCTGATATGAATAATCT
GCAGATTTCTGAGGGTTCAAAGGCTGAAGCTGTTCTGTGAGGAGGAGGACACCACCGTGCATGAGGATGATCTTTC
TAGTTCCATCAATGAACTCCCAGCAGCTTTTGAATGCAGCGACAGCTTTAGCCTGGACATGACTGAGGGGGAAGA
AAAAGGCAATCGGGCACTGGACCAGTTTACCCTGGCGAGCTTTGGAGAAGGTGACAGGGGAGTCTCTCCCCCTCC
CTCGCCCTTCTTCTCAGCCATCCTTGCCGCCTTTAGCCCGCAGCCTGTGACGATGCCGAGGAGGCTGGCGCAG
CCACATCAACCAGCTTATGTGTGACTCAGATGGCTCCTGTGCTGTGTATACATTTTCATGTGTTCTCCTCCTTGTT
TAAGAATATTCAGAAAAGGTTCTGCTTCCTAACCTGTGATGCAGCCAGTTACCTTGGAGATAACCTCCGGGGAAT
CGGATCCAAATTTGTCAGCTCTTCCCAGATGCTCACCTCCTGCTCTGAATGTCTACACTTTTTTGTTGATGCCGA
GACTCTCCTTTTCATGTGGACTTCTGGACAAGCTCAAGTTTCAAGTGTGTTAGAACTGCAAGAATATTTGGATACCTA
CAACAACAGGAAAAGAGGCCACACTCTCTTGCTTGCAAATTGTAAGGCAACATTTGCAGGGGGATCAAGAGATGG
AGTAATTACCTGTCAACCAGGGGACTCCGAAGAAAAGCAATTGGAAGTGTGTCAGAGATTATATAAGCTACACTT
CCAGCTGCTATTGCTTTTTTCACTCCTACTGTAAGCTCATCGGCCAGGTGCACGAAGTTAGCTCCATGCCAGAGCT
GCTGAATATGTCCAGGGAAGTGAAGTACCTAAAGAAACACCTGAAGGAAGCCAGTGACGTCATTGCAGCTGACCC
TCTCTATTTCAGACGGCGCGTGGTCCGAGCCACCTTCACGTCCACTGAAGCAGCCATCCAGTCCATGCTGGAGTG
CCTGAAGAACAACGAAGCTCGGCAAAGCTTTGCGGCAGATCAGGGAGTGCAAGTCTGTGGCCCAATGACATCTT
TGGAAGCAGTTCTGATGATGAGGTCCAGACACTACTGAATATTTATTTCCGTACCAAACCTCTGGGACAGACGGG
TACTTATGCCCTGGTGGGGTCTAACAGAGCCTGACCGAGATCTGCACCAAGCTGATGGAGCTGAACATGGAGAT
CCGGGACATGATCCGACAGGGCCAGAGTTACCGAGTCTCCTACTACTTTTCTTCCAGACTCCAGTGTCTTGGCAG
TAGTCTCTGACAGGAGCCTCCTGTCCCCTGAGGTTCCAACTGCAGTGCTGCCATGCTGGGGCAACGTCATTCA
GTGCTTCTCGGCCTTCAAAGGCTTGGACAGACTGTTCTCCCTCTGTTACCTGTAGGGCTTTTTCTAAAGAGG
ATGGCAGAACTTCCAACGTGTAGCAATACTATAAGAACCAAGGTAGCTTAGAACGTCCTGGACAGACTCCACTCA
TCATGCTGTGTGGCACAATGTGTTACATTTGACCGAGCATATGCAACTCGCTACTGAAGAAGTGACTTCCGTTG
CATACCAAAGCCGACTACACTGAACAGTACCTTCCTTTCTAGAAACAATTTTAGATTGGCAAAAGTGCAATGTTT
TCTTCACTCAAAAAATTTTATATTCTCAAACATGTATATTCTTCCCTGTCTTGTTCCATTTTCTTTTCTTTTT
CTTTTTCTTTTTCTTTCTTTCTGTTGGGCTGAGAAAGGGGCAGGCCAAAATGAAGCTGGCCACTGAAAAGTGAAG
ATGGTCAAAAGCTGACAGCCTGTGTATGTGAAAAGGGAATTGTAAATGGACTGCAATGTAATGTACACTGTAATT
TGAATACAATTACTGTATCTAAAAGGAGCTGCTATGAAGTACCTTTCTTATGTTGCTAGGCTACTGTTTCTGAAA
GCCCTGGATCTCTTTGCACCAAAAATGGTCCAGATAGACTCTTTTAAAGGATCTTGGCTGCTTTTTACTAGAAGG
TTGCTTTTATGAGCATATTTTACTGCTGAAGGATGAGTGTTAATTTTAAATTAAGTTTGGCGTTTTGTAGAGAAA
ACTATTCACAAGATAAATTCCAAGTCTTTTACCTGTCAGGCATGCATATTTTAAATATCTGTTTGGATAGTCAGA
AGTAGAATCATAAAGGTAAAATATGAGTTGTTACTTTGTTTCTTCGATGTCATATTTTATGTGTAATATATATGT
AAAGGGCCATTCTTAAGTTCTCTCCTTAAACTTAATGCTGTCAAGTGTAGATGTGTGCATGTGAAGTTGTTGCA
CTGCAGAAACATATTCAAGTTTATCTATGTAAGTTTACTCTGTAAATACATTTTAAAGTTTTTGTGATGTAA
GCTTAATTGATATTCTGTTTCAAGACTTTCTTTAGACTAAAAAAGACAAA

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FIGURE 361

MASQQDSGFFEISIKYLLKSWSENTSPVGNQYIKPPVPPASGTHREKGPPTMLPINVDPDSKPG EYVLKSLFVNFT
TQAEKIRIIMAEPLEKPLTKSLQGEDPQFDQVISSMSSLSEYCLPSILRTLFDWYKRQNGIEDESHEYRPRTS
NKSKSDEQQRDYLMERRDLAIDFIFSLVLIEVLKQIPLHPVIDSLIHDVINLAFKHFKYKEGYLGPNTGNMHIVA
DLYAEVIGVLAQAKFPAVKKKFM AELKELRHKEQNPYVQSIISLIMGMKFFRIKMPVEDFEASLQFMQECAHY
FLEVKDKDIKHALAGLFVEILVPVAAAVKNEVNVPCLRN FVESLYDTTLELSSRKKHSLALYPLVTCLLCVSQKQ
LFLNRWHIFLNNCLSNLKNKDPKMARVALES LYRLLWVYMIRIKCESNTATQSR LITIIITTLFPKGSRGVVP RDM
PLNIFVKIIQFIAQERLDFAMKEIIFDFLCVGKPAKAFSLNPERMNIGLRAFLVIADSLQQKDGEPPMPVTGAVL
PSGNTLRVKKTYLSKTLTEEEAKMIGMSLYYSQVRKAVDNILRHLDKEVGRCMMLTNVQMLNKEPEDMITGERKP
KIDLFRTCVA AIPRLLPDGM SKLELIDLLARLSIHMDDEL RHIAQNSLQGLLVDFSDWREDVLF GFTNFLLREVN
DMHHTLLDSSSKLLLQLLTQWKLV IQTQGVYEQANKIRNSELIANGSSHRIQSERGPHCSVLHAVEGFALVLLC
SFQVATRKL SVLILKEIRALFIALGQPEDDDRPMIDVMDQLSSSILESFIHVAVSDSATLPLTHNVLDLQWLVEWN
AVLVNSHYDVKSPSHVWIFAQSVKDPWVLC LFSFLRQENLPKH CPTALSYAWPYAFTRLQSVMLVPDNPSPINAK
KTSTAGSGDNYVT LWRNYLILCFGVAKPSIMSPGHLRASTPEIMATTPDGT VSYDNKAIGTPSVGVLLKQLVPLM
RLESIEITESLV LGFGR TNSLVFRELVEELHPLMKEALERRPENKKRRERRDLLRLQLLRIFELLADAGVISDST
NGALERDTLALGALFLEYVDLTRMLLEAENDKEVEILKDIRAHFSAMVANLIQCVPVHHRRFLFPQQSLRHHLF I
LFSQWAGPFSIMFTPLDRYSDRNHQITRYQYCAL KAMSAVLCCGPVFDNVGLSPDGYLYKWLDNILACQDLRVHQ
LGCEVVVLLLELNP DQINLFNWAIDRCYTGSYQLASGCFKAIATVCGSRNYPFDIVTLLNLVLFKASDTNREIYE
ISMQLMQILEAKLFVYSKKVAEQRP GSILYGTGHLPLPLYSVSLALLSCELARMY PELTLPLFSGKPAIPHNT PQ
RAPDHAYLPAALAAQH RAGGQQA PPPGSSPSSPEDEVK DREGDVTASHGLRGNGWGSPEATSLVLNNLMYMTAKY
GDEVPGPEMENAWNALANNEKWSNNLRITLQFLISLCGVSSDTVL LPYIKKVAIYLCRNNTIQTMEELLFELQQT
EPVNP I VQHCDNPPFYRFTASSKASAAA SGTSSSNTV VAGQENFPDAEENKILKESDERFSNVIRAHTRLESRY
SNSSGGSYDEDKNDPISPYTGWLLTITETKQPQPLPMPCTGGCWAPLVDYLPETITPRGPLHRCNIAVIFMTEMV
VDHSVREDWALHLPLLLHAVFLGLDHYRPEVFEH SKLLLHLLIALSCNSNFHSIASVLQTREMGEAKTLTVQP
AYQPEYLYTG GDFLREDQSSPVPD SGLSSSSSTSSSISLGGSSGNLPQMTQEVEDVDTAAETDEKANKLIEFLT T
RAFGPLWCHEDITPKNQNSKSAEQLTNFLRHVVSVFKDSKSGFHLEHQLSEVALQTALASSSRHYAGRSFQIFRA
LKQPLSAHALSDLLSRLVEVIGEHGDEIQGYVMEALLTLEAAVDNLS DCLKNSDLLTVLSRSSSPDLSSSSKLTA
SRKSTGQLNMNPGTTSGNTATAERSRHQRSFSVPKKFGVIDRSSDPPRSA

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FIGURE 362

TTCCCCCCCCCCCCCCCCCCCCCGCCCGAGCACAGGACACAGCTGGGTTCTGAAGCTTCTGAGTTCTGCAGCCT
CACCTCTGAGAAAACCTCTTTTCCACCAATAACCAATGAGCTCTGCGTGACTGTCCTGTCTCTCCTCATGCTAGTA
GCTGCCTTCTGCTCTCCAGCGCTCTCAGCACCAATGGGCTCAGACCCTCCCACCGCCTGCTGCTTTTCTTACACC
GCGAGGAAGCTTCCTCGCAACTTTGTGGTAGATTACTATGAGACCAGCAGCCTCTGCTCCCAGCCAGCTGTGGTA
TTCCAAACCAAAAGAAGCAAGCAAGTCTGTGCTGATCCCACTGAATCCTGGGTCCAGGAGTACGTGTATGACCTG
GAACTGAACCTGAGCTGCTCAGAGACAGGAAGTCTTCAGGGAAGGTCACCTGAGCCCGGATGCTTCTCCATGAGAC
ACATCTCCTCCATACTCAGGACTCCTCTCCGCAGTTCCCTGTCCCTTCTCTTAATTTAATCTTTTTTATGTGCCGT
GTTATTGTATTAGGTGTCATTTCCATTATTTATATTAGTTTAGCCAAAGGATAAGTGTCTATGGGGATGGTCCA
CTGTCACGTGTTTCTCTGCTGTTGCAAATACATGGATAACACATTTGATTCTGTGTGTTTTCCATAATAAACTTT
AAAATAAAATGCAGACAGTTA

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FIGURE 363

MKLCVTVLSLLMLVAAFCSPALSAPMGSDPPTACCFSYTARKLPRNFVVDYYETSSLCSQPAVVFQTKRSKQVCA
DPSESWVQEYVYDLELN

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FIGURE 364

GGCACGAGGCCTCGTGCCGCCGGGCTCTTGGTACCTCAGCGCGAGCGCCAGGCGTCCGGCCGCCGTGGCTATGTT
CGTGTCGGATTTCCGCAAAGAGTTCTACGAGGTGGTCCAGAGCCAGAGGGTCCTTCTCTTCGTGGCCTCGGACGT
GGATGCTCTGTGTGCGTGCAAGATCCTTCAGGCCTTGTTCCAGTGTGACCACGTGCAATATACGCTGGTTCCAGT
TTCTGGGTGGCAAGAACTTGAAACTGCATTTCTTGAGCATAAAGAACAGTTTCATTATTTTATTCTCATAAACTG
TGGAGCTAATGTAGACCTATTGGATATTCTTCAACCTGATGAAGACACTATATTCTTTGTGTGTGACACCCATAG
GCCAGTCAATGTGTCGAATGTATACAACGATACCCAGATCAAATTACTCATTAAACAAGATGATGACCTTGAAGT
TCCCGCCTATGAAGACATCTTCAGGGATGAAGAGGAGGATGAAGAGCATTTCAGGAAATGACAGTGTGGGTCAGA
GCCTTCTGAGAAGCGCACACGGTTAGAAGAGGAGATAGTGGAGCAAACCATGCGGAGGAGGCAGCGCGAGAGTG
GGAGGCCCCGAGAAGAGACATCCTCTTTGACTACGAGCAGTATGAATATCATGGGACATCGTCAGCCATGGTGTAT
GTTTGAGCTGGCTTGGATGCTGTCCAAGGACCTGAATGACATGCTGTGGTGGGCCATCGTTGGACTAACAGACCA
GTGGGTGCAAGACAAGATCACTCAAATGAAATACGTGACTGATGTTGGTGTCTCGCAGCGCCACGTTTCCCGCCA
CAACCACCGGAACGAGGATGAGGAGAACACACTCTCCGTGGACTGCACACGGATCTCCTTTGAGTATGACCTCCG
CCTGGTGTCTTACCAGCACTGGTCCCTCCATGACAGCCTGTGCAACACCAGCTATACCGCAGCCAGGTTCAAGCT
GTGGTCTGTGCATGGACAGAAGCGGCTCCAGGAGTTTCCTTGACAGCATGGGTCTTCCCTGAAGCAGGTGAAGCA
GAAGTTCCAGGCCATGGACATCTCCTTGAAGGAGAATTTGCGGGAAATGATTGAAGAGTCTGCAAATAAATTTGG
GATGAAGGACATGCGCGTGCAGACTTTCAGCATTCATTTTGGGTTCAAGCACAAGTTTCTGGCCAGCGACGTGGT
CTTTGCCACCATGTCTTTGATGGAGAGCCCCGAGAAGGATGGCTCAGGGACAGATCACTTCATCCAGGCTCTGGA
CAGCCTCTCCAGGAGTAACCTGGACAAGCTGTACCATGGCTGGAACCTCGCCAAGAAGCAGCTGCGAGCCACCCA
GCAGACCATTGCCAGCTGCCTTTGCACCAACCTCGTCATCTCCAGGGGCCTTTCTGTACTGCTCTCTCATGGA
GGGCACTCCAGATGTGCTGTCTCTTAGGCCGGCATCCCTAAGCCTGCTCAGCAAACACCTGCTCAAGTCCTT
TGTGTGTTGACAAAGAACC GGCGCTGCAAACCTGCTGCCCCCTGGTGTGCTGCCCCCTGAGCATGGAGCATGG
CACAGTGACCGTGGTGGGCATCCCCCAGAGACCGACAGCTCGGACAGGAAGAAGTTTTTTGGGAGGGCGTTTGA
GAAGGCAGCGGAAAGCACCAGCTCCCGGATGCTGCACAACCATTTTGACCTCTCAGTAATTGAGCTGAAAGCTGA
GGATCGGAGCAAGTTTCTGGACGCACTTATTTCCCTCCTGTCCTAGGAATTTGATTCTTCCAGAATGACCTTCTT
ATTTATGTAACCTGGCTTTTCAATTTAGATTGTAAGTTATGGACATGATTTGAGATGTAGAAGCCATTTTTTTATTAAA
TAAAATGCTTATTTTAGGCTCCGTCCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 365

MFVSDFRKEFYEVVQSQRVLLFVASDVDALCACKILQALFQCDHVQYTLVPVSGWQELETAFLEHKEQFHYFILI
NCGANVDLLDILQPDEDTIFFVCDTHRPVNVVNVYNDTQIKLLIKQDDLEVPAYEDIFRDEEEDEEHSGNDSG
SEPSEKRTRLEEEIVEQTMRRRQRREWEARRRDILFDYEQYEHGTSSAMVMFELAWMLSKDLNDMLWWAIVGLT
DQWVQDKITQMKYVTDVGVLRHVSRHNHRNEDEENTLSVDCTRISFEYDLRLVLYQHWSLHDSL CNTSYTAARF
KLWSVHGQKRLQEF LADMGLPLKQVKQKFQAMD ISLKENLREMIEESANKFGMKDMRVQTF SIHFGFKHKFLASD
VVFATMSLMESPEKDGSGTDHFIQALDSLRSNLDKLYHGLELAKKQLRATQQT IASCLCTNLVISQGPFLYCSL
MEGTPDVMLFSRPASLSLLSKHLLKSFVCSTKNRRCKLLPLVMAAPLSMEHGT VTVVGIPPETDSSDRKNFFGRA
FEKAAESTSSRMLHNHFDLSVIELKAEDRSKFLDALISLLS

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FIGURE 366

GCGGGATTTTCAAGCGTAGGCCCCCGGGAACCTCGAGCTGCCATGAGCCTCTGGGTGGACAAGTATCGGCCCTGCT
CCTTGGGACGGCTGGACTATCACAAGGAGCAGGCGGCCAGCTGCGGAACCTGGTGCAGTGTGGTGACTTTCCTC
ATCTGTTAGTGTACGGACCATCAGGTGCTGGAAAAAAGACAAGAATTATGTGTATTCTACGTGAACTTTATGGTG
TTGGAGTGGAAAAATTGAGAATTGAACATCAGACCATCACAACCTCCATCTAAAAAATAAATTGAAATTAGCACCA
TTGCAAGTAACTACCACCTTGAAGTTAATCCTAGTGATGCTGGAAATAGTGACCGAGTAGTCATTGAGGAGATGT
TGAAAACAGTGGCACAATCACAACAACTTGAAACAACTCTCAAAGGGATTTTAAAGTGGTATTATTGACAGAAG
TTGACAACTCACCAAAGATGCTCAGCATGCCCTTGCGAAGAACCATGGAAAAATATATGTCTACCTGCAGATTGA
TCTTGTGCTGCAATTCTACATCTAAAGTGATCCCACCTATTCTGTAGTAGGTGCTTGGCGGTTTCGTGTGCCTGCTC
CCAGCATTGAAGATATTTGCCACGTGTTATCTACTGTGTGAAGAAGGAAGGTCTGAATCTTCCTTCACAACCTGG
CTCATAGACTTGCAGAGAAGTCTTGTAGAAAATCTCAGAAAAGCCCTGCTTATGTGTGAAGCCTGCAGAGTGCAAC
AATATCCTTTTACTGCAGATCAAGAAATCCCTGAGACAGATTGGGAGGTGTATCTGAGGGAGACTGCAAAATGCTA
TTGTCTAGTCAGCAAACCTCCACAAAGGCTCCTTGAAGTTCGTGGAAGGCTGTATGAGCTTCTAACTCATTGTATTCT
CTCCTGAGATAATAATGAAGGGCCTTCTCTCAGAACTGTTACATAATTGTGATGGACAACCTGAAAGGGGAGGTGG
CACAAATGGCAGCTTACTATGAGCATCGTCTACAGCTGGGTAGCAAAGCCATTTATCACTTGGAAAGCGTTTGTGG
CCAATTTCATGGCACTTTATAAGAAGTTCATGGAGGATGGATTGGAAGGCATGATGTTCTGACTTCTGTGCTAGTTA
TTCTTGCAAAGATTTCTCAGTATCAGTATTTACATACAGCTTATATTAAGAGCTGTGGGTAAATTAAGTGAAC
TTAATCATGTGCTATTTGCGTTTTTTTGGTAATAACTTCTCTGTGAATAATTAATCATCCTCTGAGTTAAATAAT
TGCTCCTATACTATTGAAGTATGTAGTTTTGTACATAACTTAGAGACTTTAGAGTCTAAGAAAATGATCTTAATT
TACTTTAAGCATTGGTTATTCAAGTATTCATTGTTGATCCTCCTATTCTCTTCCGTCTAATCTCTCACCTGCTAA
AGGAGATTTACACATTAGAAAGCAAAGATTATTTTCATTTATCCAGATGACCATTTTCTGCCACAGGTAACATGA
TTGTTTGACACACCATTATATTTAATTCTAGTTTCTCTCAATGAATAATTGTATTTTTGTAGGAAATGTAAGATT
TCATTCTGAAACATAATTATTGGTATGGACAAAATTGCAGATACCATTTCTGTTGAGGCTGCAGATTCCAACCTT
TTATTTTCAGTGGTTCAGATTAGTATTAGGTGCGGTACTAAGAAATAAGCATGTTTTCTACTAATTTAAGTACTTGAG
ACTCTTGAAGAAAATTGAGAATGAAGTCTGGAGAAAGGTATGTTACTGTAGTAATTACTCTTTGAACAGGTTTT
GTGTTTTGTCAATTAGCTCTGCCCTTTTAAATTAAATATTTTGGTTTCATGGACCAAAGGGTTTACTTGACAAATTT
GTGTGACAGACTCCGAACAATTCCTTTACTACGAAGTATAATTTATAAAATAAAATATAACCCATTTTAAAGGTAC
AGTTTGATTTTTTGACCAGTGAAACTATGATCCCAATCAAGGTATAGATGCCGTCACCCCAAAAAGTTCCCTCCAT
ATCCCTTTGCAGTCAGTTCATCCCTACCCTGGCCCAGATGATCACTGATCTTGTGATTATAGATGAGTTTTGCCA
GTTCAAGAATTTAATGGAATCAGATATTGTAAGCATTCTTGTGTAATACTTCATTCTCTCATTATTGAGATTCT
ATCCATATTGTTGAATGTTTCACTAGTTAATGTTTATTGTTCAATATTTTTGTATATACTTTTAAAGCCTATTCA
CTTGCTGATGGATCTTTGGTTTGTTCAGGTTTGGTTATTATGAATAAAGTTGCTGTGAATAAAAAAAAAAAAAA
AAAAAA

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FIGURE 367

MSLWVDKYRPCSLGRLDYHKEQAAQLRNLVQCGDFPHLLVYGPSGAGKKTRIMCILRELYGVGVEKLRIEHQTIT
TPSKKKIEISTIASNYHLEVNPSDAGNSDRVVIQEMLKTVAQSQQLETNSQRDFKVVLLTEVDKLTQDAQHALRR
TMEKYMSTCRLILCCNSTSKVIPPIRSRCLAVRVPA P SIEDICHVLSTVCKKEGLNLPSQLAHLAEKSCRNLRK
ALLMCEACRVQQYPFTADQEIPETDWEVYLRETANAIVSQQTPQRLLEVGRGRLYELLTHCIPPEIIMKGLLSELL
HNCDGQLKGEVAQMAAYYEHRLQLGSKAIYHLEAFVAKFMALYKKFMEDGLEGMMF

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FIGURE 368

CGAGCTGCCATGAGCCTCTGGGTGGACAAGTATCGGCCCTGCTCCTTGGGACGGCTGGACTATCACAAAGGAGCAG
GCGGCCCAGCTGCGGAACCTGGTGCAGTGTGGTGACTTTCTCATCTGTTAGTGTACGGACCATCAGGTGCTGGA
AAAAAGACAAGAATTATGTGTATTTTACGTGAACTTTATGGTGTGGAGTGGAAAAATTGAGAATTGAACATCAG
ACCATCACAACTCCATCTAAAAAATAATTGAAATTAGCACCATTGCAAGTAACTACCACCTTGAAGTTAATCCT
AGTGATGCTGGAAATAGTGACCGAGTAGTCATTGAGGAGATGTTGAAAACAGTGGCACAATCACAACTTGA
ACAACTCTCAAAGGGATTTTAAAGTGGTATTATTGACAGAAGTTGACAACTCACCAAAGATGCTCAGCATGCC
TTGCGAAGAACCATGGAAAAATATATGTCTACCTGCAGATTGATCTTGTGCTGCAATTCTACATCTAAAGTGATC
CCACCTATTCTAGTAGGTGCTTGGCGGTTCTGTGCTGCTCCAGCATTGAAGATATTTGCCACGTGTTATCT
ACTGTGTGTAAGAAGGAAGGTCTGAATCTTCTTCCAACTGGCTCATAGACTTGCAGAGAAGTCTTGTAGAAAT
CTCAGAAAAGCCCTGCTTATGTGTGAAGCCTGCAGAGTGCAACAATATCCTTTTACTGCAGATCAAGAAATCCCT
GAGACAGATTGGGAGGTGTATCTGAGGGAGACTGCAATGCTATTGTCAGTCAGCAAATCCACAAAGGCTCCTT
GAAGTTCGTGGAAGGCTGTATGAGCTTCTAACTCATTGTATTCTCCTGAGATAATAATGAAGGGCCTTCTCTCA
GAACTGTTACATAATTGTGATGGACAAGTGAAGGGGAGGTGGCACAATGGCAGCTTACTATGAGCATCGTCTA
CAGCTGGGTAGCAAAGCCATTTATCACTTGGAAGCGTTTGTGGCCAAATTCATGGCACTTTATAAGAAGTTCATG
GAGGATGGATTGGAAGGCATGATGTTCTGACTTCTGTGAGTTATTCTTGCAAAGATTTCTCAGTATCAGTATTTA
CATAAGCTTATATTAAAGAGCTGTGGGTAAATTAAGTGAATTAATCATGTCGTTATTTGGGTTTTTTTGGTAA
TAAGTCTCTGTGAAGTATTAATCATCCTCTGAGTTAAATAATTGCTCCTATACTATTGAAGTATGTAGTTTTGT
ACATAACTTAGAGACTTTAGAGTCTAAGAAAATGATCTTAATTTACTTTAAGCATTGGTTATTCAAGTATTCATT
GTTGATCCTCCTATTCTCTTCCGTCTAATCTCTCACCTGCTAAAGGAGATTTACACATTAGAAAGCAAAGATTAT
TTTCATTTATCCAGATGACCATTTTCTGCCACAGGTAACATGATTGTTTGACGG

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FIGURE 369

MSLWVDKYRPCSLGRLDYHKEQAAQLRNLVQCGDFPHLLVYGPSGAGKKTRIMCILRELYGVGVEKLRIEHQITIT
TPSKKKIEISTIASNYHLEVNPSDAGNSDRVVIQEMLKTVAQSQQLETNSQRDFKVVLLTEVDKLTQDAQHALRR
TMEKYMSTCRLILCCNSTSKVIPPIRSRCLAVRVPAPSIEDICHVLSTVCKKEGLNLPSQLAHLAEKSCRNLRK
ALLMCEACRVQQYPFTADQEIPETDWEVYLRETANAIVSQQTPQRLLEVGRGRLYELLTHCIPPEIIMKGLLSELL
HNCDGQLKGEVAQMAAYYEHRLQLGSKAIYHLEAFVAKFMALYKKFMEDGLEGMMF

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FIGURE 370

AGTCTCCGGCGAGTTGTTGCCTGGGCTGGACGTGGTTTTGTCTGCTGCGCCGCTCTTCGCGCTCTCGTTTCATT
TTCTGCAGCGCGCCACGAGGATGGGCCACAAGCAGATCTACTACTCGGACAAGTACTTCGACGAACACTACGAGT
ACCGGCATGTTATGTTACCCAGAGAACTTTCCAAACAAGTACCTAAAACATCTGATGTCTGAAGAGGAGTGGA
GGAGACTTGGTGTCCAACAGAGTCTAGGCTGGGTTCATTACATGATTCATGAGCCAGAACCACATATTCTTCTCT
TTAGACGACCTCTTCCAAAAGATCAACAAAAATGAAGTTTATCTGGGGATCGTCAAATCTTTTTCAAATTTAATG
TATATGTGTATATAAGGTAGTATTCAGTGAATACTTGAGAAATGTACAAATCTTTCATCCATACCTGTGCATGAG
CTGTATTCTTCACAGCAACAGAGCTCAGTTAAATGCAACTGCAAGTAGGTTACTGTAAGATGTTTAAAGATAAAG
TTCTTCCAGTCAGTTTTTCTCTTAAGTGCTGTTTGAGTTTACTGAAACAGTTTACTTTTGTTCAATAAAGTTTG
TATGTTGCATTTAAAAA

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FIGURE 371

MAHKQIYYSDKYFDEHYEYRHVMLPRELSKQVPKTHLMSEEEWRRLGVQQSLGWVHYMIHEPEPHILLFRRPLPK
DQQK

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FIGURE 372

GAATTCCCAAACGTGCACAGGGGAGTGAGGGCAGGGCGCTCGCAGGGGGCACGCAGGGAGGGCCCAGGGCGCCAG
GGAGGCCGCGCCGGGCTAATCCGAAGGGGCTGCGAGGTCAGGCTGTAACCGGGTCAATGTGTGGAATATTGGGGG
GCTCGGCTGCAGACTTGGCCAAATGGACGGGACTATTAAGGAGGCTCTGTGCGGTGGTGAGCGACGACCAGTCCCT
CTTTGACTCAGCGTACGGAGCGGCAGCCCATCTCCCCAAGGCCGACATGACTGCCTCGGGGAGTCTTGACTACGG
GCAGCCCCACAAGATCAACCCCCCTCCACCACAGCAGGAGTGGATCAATCAGCCAGTGAGGGTCAACGTCAAGCG
GGAGTATGACCACATGAATGGATCCAGGGAGTCTCCGGTGGACTGCAGCGTTAGCAAATGCAGCAAGCTGGTGGG
CGGAGGCGAGTCCAACCCCATGAATAACAAGCTATATGGACGAGAAGAATGGCCCCCTCTCCCAACATGAC
CACCAACGAGAGGAGAGTCAATCGTCCCCGACAGCCCCACACTGTGGACACAGGAGCATGTGAGGCAATGGCTGGA
GTGGGCCATAAAGGAGTACAGCTTGATGGAGATCGACACATCCTTTTTCCAGAACATGGATGGCAAGGAACTGTG
TAAAATGAACAAGGAGGACTTCTCTCGCGCCACCACCCTCTACAACACGGAAGTGCTGTTGTACACCTCAGTTA
CCTCAGGGAAAGTTCACTGCTGGCCTATAATACAACCTCCACACCGACCAATCCTCACGATTGAGTGTCAAAGA
AGACCTTCTTATGACTCAGTCAGAAGAGGAGCTTGGGGCAATAACATGAATTCTGGCCTCAACAAAAGTCTCTCC
CCTTGGAGGGGCACAAACGATCAGTAAGAATACAGAGCAACGGCCCCAGCCAGATCCGTATCAGATCCTGGGCCC
GACCAGCAGTCGCTAGCCAACCCTGGAAGCGGGCAGATCCAGCTGTGGCAATTCTCTGGAGCTGCTCTCCGA
CAGCGCCAAACGCCAGCTGTATCACCTGGGAGGGGACCAACGGGGAGTTCAAAATGACGGACCCCGATGAGGTGGC
CAGGCGCTGGGGCGAGCGGAAAAGCAAGCCCAACATGAATTACGACAAGCTGAGCCGGGGCCCTCCGTTATTACTA
TGATAAAAACATTATGACCAAAGTGCACGGCAAAAAGATATGCTTACAAATTTGACTTCCACGGCATTGCCCAGGC
TCTGCAGCCACATCCGACCGAGTCGTCCATGTACAAGTACCCTTCTGACATCTCCTACATGCCTTCTTACCATGC
CCACCAGCAGAAGGTGAACTTTGTCCCTCCCCATCCATCCTCCATGCCTGTCACTTCTCTCAGCTTCTTTGGAGC
CGCATCACAACTACTGGACCTCCCCACGGGGGGAATCTACCCCAACCCCAACGTCCCCGCCATCCTAACACCCA
CGTGCTTTCACACTTAGGCAGCTACTACTAGAAAGCTTCTTCTAGCTGAAGCCCATCCTGCACACTTACTGGATGC
TTTGGACTCAACAGGACATATGTGGCCTTGAAGGGAAGACAAAACCTGGATGTTCTTTCTTGTGGATAGAACCCTT
TGTATTTGTTCTTTAAAAACATTTTTTTTTTAATGTTGGTAACTTTTGCTTCTCTACCTGAACAAAGAGATGAATA
ATTCCATGGGCCAGTATGCCAGTTTGAATTCTCAGTCTCCTAGCATCTTGTGAGTTGCATATTAAGATTACTGGA
ATGGTTAAGTCATGGTTCTGAGAAAGAAGCTGTACGTTTTCTTTATGTTTTATGACCAAAGCAGTTTCTTGTCA
ATACACGGGGTTCAGTATGACACAGAATCATGGACTTAACCCGTCATGTTCTGGTTTGAGATTTAGTGACAAATA
GAGGTGGGAAGCTTATAATCTAATTTTAGGAGGACCAAATTCAGCGGATGGCAACTGGAACATTGATTGTAAGGC
CAGTGAAGTTTTACCCAACTGGAATTTGATGGAAAGAAGGTTTGTGTGTTAAGACGCCAAGGGCATTGCAGAA
TCCCTCTCAGTGGACAGTATGCACTCAGCTGACCACTCTCTCTAGAAATAGTCAAGATATGAACAAAGAAATTTT
AATGCAAATACATACATTCTGAAAGACGGGGAATTAATTTACTAATTTTTTTTTTTTAAATGATGACAGTGGTC
CCAGAACTTGGAAGGTTGTAGGGATTTCTAAACTCAAGCAGATTTCGCAAGTGCTGTGCGCTTGTGACACCATCA
GACCAGGGCCAACCAATCAGAAGGCAACTTACTGTATAAATTATGCAGAGTTATTTTCTATATCTCACAGTATT
AAAAATAAATAATTAAAAATTAAGAATAAATAAACGAGTTGACCTCGGTCACAAAAGCAGTTTACTATCGAAT
CAATCGCTGTTATTTTTTTTTTAATGTAATTTGTACATCTTTTTTCAATCTGTACATTTGGGCTGTCTTGTATGTT
TTTATGCTCCTTTTTTAAAAAGCATAATATGCCTATAGCTGAAAAGGAAACAGGGCTGTTAAGTCACTGACTTAT
GAGAAAGCAAAGCACTGGTACAGTTATTTAACAGGCATACACAAGCAGGGAAAAGATAATCCATTTAGATCTTTA
ATGCTTTGGAAATGCGTGTAAACAGTACTGCAATAATCACAGCTCTGGGAAAAACAACGAACTTTCCCTTGTGGA
GAGGAGGGATTTTCTGCTCTATATAAGCAACATATTTTGTAGACATTAAATATATATAATTTTGCAGGTAATTG
TTGACTTTTTTAACTATATTAAGTGTTAAGCTGCAAACTGTCAAAGAAGACCATGTTGTAATAAATTTGACTAA
ATAAATGGTTCCTTCTCTCAAAAAAAAAAAAAA

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FIGURE 373

MDGTIKEALS VVSDDQSLFDSAYGAAHL PKADMTASGSPDYGQPHKINPLPPQQEWINQPVRVNVKREYDHMNG
SRESPVDCSVSKCSKLVGGGESNPMNYSYMDEKNGPPPPNMTTNERRVIVPADPTLWTQEHVRQWLEWAIKEYS
LMEIDTSFFQNMDGKELCKMNKEDFLRATTLYNTEVLLSHLSYLRESSLLAYNTTSHTDQSSRLSVKEDPSYDSV
RRGAWGNMNSGLNKSPPLGGAQTISKNTEQRPQPDYQILGPTSSRLANFGSGQIQWLWQFLELLSDSANASCI
TWEGTNGEFKMTDPDEVARRWGERKSKPNMNKYDKLSRALRYYYDKNIMTKVHGKRYAYKFDFHGIAQALQPHPT
SSMYKYPSDISYMP SYHAHQKVN FVPPHPSSMPVTSSSFFGAASQYWTSP TGGIYPNPVPRHPNTHVPSHLGS
YY

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FIGURE 374A

CGGCGCGGGTGTGAGAGCGGTGTGGTAGGTGTTGTAGCCGCTATGGTGAAGTTCGCTTTGTAGCGGCCCCGGCT
AGAGAGTTGGCCTGTTCCCTGCCCTTTGTGACCCGGAGGAGCTTTTGGGGGTGCGTCAAGCCCCTGGCCTGAGGCA
GCGAACTGGTTTGTGGCCTGTTTGATTCTGTGAGAGGTTTGCTGACCCAAGACAGTATCGAAAATGCATATTAA
GTCAATTATTCTAGAGGGATTCAAGTCCTATGCTCAGAGGACCGAAGTCAATGGTTTTGACCCCCTCTTCAATGC
TATCACTGGCTTAAATGGTAGTGGGAAATCCAACATATTGGACTCCATCTGCTTTTTACTGGGCATCTCCAACCT
GTCTCAGGTTTCGGGCTTCTAATTTACAAGATTTAGTTTACAAAAATGGGCAGGCTGGTATTACCAAAGCCTCTGT
GTCAATCACTTTTGATAATTCTGACAAAAAGCAAAGTCCTTTAGGATTTGAGGTTTCATGATGAAATCACAGTAAC
AAGGCAGGTGGTTATTGGTGGTAGAAATAAATATTTAATCAATGGAGTCAATGCCAACAAACACCAGAGTACAGGA
TCTCTTCTGTTCTGTTGGCCTTAATGTTAAACAACCTCACTTTCTCATCATGCAGGGCCGAATTACAAAAGTATT
GAATATGAAACCACCAGAGATTTTATCCATGATAGAAGAAGCAGCTGGAACCAGGATGTATGAATACAAAAAAT
AGCTGCACAGAAAACATAGAAAAAAGGAGGCTAAGCTGAAAGAAATTAAGACGATACTTGAAGAAGAGATTAC
TCCAACCATTTCAAAAATTAAGAGAGGAAAGATCGTCCTACTTGGAGTACCAAAAAGTAATGAGAGAAATAGAACA
TTTGAGTCGTTTATATATTGCTTATCAGTTTTTGTCTGGCTGAAGATACCAAAAGTACGCTCAGCTGAGGAATTA
AGAAATGCAAGATAAAGTTATAAAGCTTCAGGAAGAATTGTCTGAGAATGATAAAAAAATAAAGCACTTAATCA
TGAAATAGAAGAATTGGAAAAAGAAAAGATAAGGAAACTGGAGTTATACTTCGATCTTTAGAAGATGCTCTTGC
AGAGGCTCAGCGAGTTAATACTAAATCTCAAAGCGCATTTGATCTCAAGAAGAAAAATCTGGCATGTGAGGAAAG
CAAACGCAAAGAGCTGGAAAAAATATGGTTGAGGACTCAAAAACCTTTAGCAGCAAAGGAAAAAGAGGTTAAAA
GATAACAGATGGACTGCATGCCCTTCAAGAAGCAAGTAATAAAGATGCTGAAGCTCTGGCAGCTGCACAGCAGCA
CTTCAATGCTGTTTCCGCTGGCCTGTCCAGTAATGAAGATGGAGCAGAAGCAACTCTTGCTGGTCAAATGATGGC
CTGTAATAATGATATAAGTAAAGCTCAGACAGAAGCCAAACAGGCTCAGATGAAGTTGAAGCATGCTCAACAGGA
ATTAAGAATAAAACAAGCTGAAGTTAAGAAGATGGATAGTGGCTACAGGAAGGATCAAGAAGCTCTAGAAGCTGT
AAAAAGACTTAAAGAAAAAATTTGAAGCTGAAATGAAAAAGCTAAATTATGAAGAAAAATAAGAGGAAAGCCTTTT
GGAAAAAGCGCAGGCAGCTGTCTCGTGATATTGGTAGATTGAAAGAAACATATGAAGCTCTATTAGCCAGATTTCC
CAATCTTCGATTTGCATACAAGGATCCAGAGAAGAACTGGAATAGAAATTTGTGTGAAGGACTTGTGGCTTCTCT
GATTAGTGTGAAAGACACTTCTGCAACCACAGCTTTAGAATTAGTGGCTGGAGAACGACTCTACAATGTTGTAGT
AGACACAGAAGTTACTGGTAAAAAGCTACTAGAAAGGGGGAACTGAAACGTCGATACACTATAATTCCACTCAA
TAAATTTTCAGCCAGATGTATTGCACCAGAACTCTGAGAGTTGCTCAGAATCTTGTGGCCCTGACAACGTTCA
TGTGGCTCTTTCCCTGGTTGAATATAAACAGAACTTCAGAAAGCAATGGAGTTTGTCTTTGGAACAACATTTGT
TTGTGACAATATGGATAATGCCAAAAAGTGGCCTTTGATAAGAGGATAATGACTAGAACTGTAACCTCTCGGAGG
TGATGTGTTTGATCTCATGGGACATTGAGTGGAGGTGCTCGATCCCAGGCAGCTTCCATTTTAACCAAGTTTCA
AGAATCAAAGATGTTTCAAGGATGAAGTGAAGATCAAAGAGAATGAGCTGCGGGCTCTAGAAGAGGAATTAGCAGG
TCTTAAAAACACTGCTGAAAAGTATCGCCAACATAAACAGCAGTGGGAGATGAAAACTGAAGAGGCAGATTTATT
ACAAACCAAGCTCCAGCAAAGCTCATATCACAAGCAACAAGAAGATTAGATGCCCTTAAAAAACCATTGAGGA
AAGTGAGGAGACTTTGAAAAACACTAAAGAAATCCAAAGAAAAGCAGAAAGAAAAATATGAAGTATTGGAAAAATA
AATGAAAAATGCAGAAGCTGAAAGAGAGCGAGAAGTGAAGATGCTCAGAAAAAAGTGGATTGTGCCAAAACAAA
GGCAGATGCATCTAGCAAGAAGATGAAAGAAAAACAACAGGAAGTTGAAGCTATCACTCTGGAAGTGAAGAGCT
CAAGAGAGAGCATACATCTTACAAACAACAGCTTGAAGCTGTAAATGAAGCTATCAAAATCCTATGAAAGTCAGAT
TGAAGTAATGGCAGCTGAGGTGGCTAAAAATAAGGAGTCAGTAAATAAAGCTCAAGAAGAGGTGACCAAGCAAAA
AGAGGTGATAACAGCCCCAAGACACTGTAATTAAGCTAAATATGCAGAAGTGGCAAAACACAAGGAGCAAAACAAT
GATTCTCAGCCTTAAAAATTAAGGAATTAGACCACCACATCAGCAAACATAAACGGGAGGCTGAAGATGGTGTCTGC
AAAGGTATCCAAAAATGTTGAAAGATTATGACTGGATTAATGCAGAGAGACACCTCTTTGGCCAACCAATAGTGC
CTATGATTTTCAAACTAACAACCTTAAAGAAGCTGGTCAGAGACTTCAGAAGTTGCAAGAAATGAAGGAGAACT
AGGAAGAAATGTCAATATGAGAGCTATGAATGTATTGACAGAAGCTGAAGAGCGATGCAATGACTTGTATGAAGAA
GAAGAGAATTGTAGAAAATGACAAATCCAAATTTCTTACAACATATAGAAGACCTTGACCAGAAGAAAAACCAAGC
CCTAAATATTGCATGGCAAAAGGTGAACAAGGACTTTGGGTCTATTTTTTCTACTCTTTTGCCTGGTGCTAATGC
TATGCTTGCACCACCAGAGGGTCAAACCTGTTTTGGATGGTCTGGAGTTCAAGGTTGCCCTTAGGAAATACCTGGAA
AGAAAACCTAACTGAACTTAGTGGTGGTCAGAGGTCTTTAGTGGCCTTGTCATTAATACTGTCCATGCTTCTCTT
CAAACCTGCTCCAATTTATATCCTTGATGAGGTAGATGCAGCCTTGATCTTTCTCATACCCAAAACATTGGACA

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FIGURE 374B

GATGCTGCGTACTCATTTCACACATTCTCAGTTCATTGTGGTGTCACTAAAAGAAGGTATGTTCAACAATGCAAA
CGTTCCTTTTCAAACCAAGTTTGTGGATGGTGTCTTCTACAGTAGCCAGATTTACTCAATGTCAAAATGGAAAGAT
TTCAAAGGAAGCAAAATCCAAGGCAAAACCACCCAAAGGAGCACATGTGGAAGTTTAAACTACAAAGTTATTTCT
TCATCTTGACCTGTTTTTTTTAAATGTAAACTTTTAAGGACTTGAGATAACTAATTTGTTTATATACAAAAATTAA
TGTTACTGTGTTACTTAACCCATGTTTTCTCTTTATATAATCACTTATCGCTTACAAATGAGCATATATTCCTCA
TCTCTTAAGTAGTCTAATTATGGTCCAATTATTGTGGTTGTGATTTTATGCATATCCATCAAAATGTTTTTTTC
TTATGCGGGTCTTTTATATATTAGGGATCCTGAGATACCCGATTCTATATGTAAAAGCTAATATACAAAAAAGCA
GATTAAATTACATGATAAATGTAGCTGAAAAAAAAAAAAA

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FIGURE 375

MHIKSIILEGFKSYAQRTEVNGFDPLFNAITGLNGSGKSNILDSICFLLGISNLSQVRASNLDLVYKNGQAGIT
KASVSITFDNSDKKQSPLGFVHDEITVTRQVVIGGRNKYLINGVNANNTRVQDLFCVGLNVNPNHFLIMQGRI
TKVLNMKPPEILSMIEEAAGTRMYEYKKIAAQKTIEKKEAKLKEIKTILEEEITPTIQKLKEERSSSYLEYQKVMR
EIEHLSRLYIAYQFLLAEDTKVRSAEELKEMQDKVIKLQEELSENDKKIKALNHEIEELEKRKDKETGVILRSLE
DALAEAQRVNTKSQSAFDLKKKNLACEESKRKELEKNMVEDSKTLAAKEKEVKKITDGLHALQEASNKDAEALAA
AQQHFNAVSAGLSSNEDGAEATLAGOMMACKNDISKAQTEAKQAQMMLKHAQQELKNKQAEVKKMDSGYRKDQEA
LEAVKRLKEKLEAEMKKLNYEENKEESLLEKRRQLSRDIGRLKETYEALLARFPNLRFAVKDPEKNWNRNCVKGL
VASLISVKDTSATTALVAGERLYNVVVDTEVTGKKLLERGELKRRYTIIPLNKISARCIAPETLRVAQNLVGP
DNVHVALSLVEYKPELQKAMEFVFGTTFVCDNMDNAKKVAFDKRIMTRTVTLGGDVFDPHGTLSSGGARSQAASIL
TKFQELKDVQDELRIKENELRALEEELAGLKNTAEKYRQLKQQWEMKTEEADLLQTKLQQSSYHKQQEELDALKK
TIEESEETLKNTKEIQRKAEKEYEVLENKMKNAEAEERERELKDAQKKLDCAKTKADASSKKMKEKQQEVEAITLE
LEELKREHTSYKQQLEAVNEAIKSYESQIEVMAAEVAKNKESVNKAQEEVTKQKEVITAQDTVIKLNMQKWQNT
SKTMILSLKIKELDHHISKHKREAEDGAAKVSMLKDYDWINAERHLFGQPNSAYDFKTNNPKEAGQRLQKLQEM
KEKLGRNVNMRAMNVLTEAEERCNDLMKKKRIVENDKSKILTIEDLDQKKNQALNIAWQKVNKDFGSIFSTLLP
GANAMLAPPEGQTVLDGLEFKVALGNTWKENLTELSGGQRSIVALSLILSMLLFKPAPIYILDEVDAALDLSHTQ
NIGQMLRTHFTHSQFIVVSLKEGMFNANVLFKTKFVDGVSTVARFTQCQNGKISKEAKSKAKPPKGAHVEV

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FIGURE 376

ACTAAGACCGCAAGGCATTTCATTTCTCTCTACGGTGGATGCGGACGCCGGGAGGAGAGAGCCCCAGAGAGAGGA
GCTGGGAGCGGAGGCGCAGGCAATGCTCAGCCCTGGATGTAGCTGAGAGGCTGGGAGAAGAGACGACCGCTGGAG
ACCGAGCGGCGTGGGGAAGACCTAGGGGGGTGGGTGGGGGAAGCAGACAGGAGAACAACCTCGAAATCAAGCGCTTT
ACAGATTATTTTATTTTGTATAGAGAACACGTAGCGACTCCGAAGATCAGCCCCAATGAACATGTCAGTGTGAC
TTTACAAGAATATGAATTCGAAAAGCAGTTCAACGAGAATGAAGCCATCCAATGGATGCAGGAAAACCTGGAAGAA
ATCTTTCTGTTTTCTGCTCTGTATGCTGCCTTTATATTTCGGTGGTGGGCACCTAATGAATAAACGAGCAAAGTT
TGAACCTGAGGAAGCCATTAGTGCTCTGGTCTCTGACCCTTGAGTCTTCAGTATATTTCGGTGTCTTCGAACTGG
TGCTTATATGGTGTACATTTTGTATGACCAAAGGCCTGAAGCAGTCAGTTTGTGACCAGGGTTTTTACAATGGACC
TGTCAGCAAATTCTGGGCTTATGCATTTGTGCTAAGCAAAGCACCCGAACCTAGGAGATACAATATTTCATTATTCT
GAGGAAGCAGAAGCTGATCTTCTGCACTGGTATCACCACATCACTGTGCTCCTGTACTCTTGGTACTCCTACAA
AGACATGGTTGCCGGGGGAGGTTGGTTTCATGACTATGAACTATGGCGTGACGCCGTGATGTACTCTTACTATGC
CTTGCGGGCGGCAGGTTTCCGAGTCTCCCGGAAGTTTGCCATGTTTCATCACCTTGTCAGATCACTCAGATGCT
GATGGGCTGTGTGGTTAACTACCTGGTCTTCTGCTGGATGCAGCATGACCAGTGTCACTCTCACTTTTCAGAACAT
CTTCTGGTCTCACTCATGTACCTCAGCTACCTTGCTCTTCTGCCATTTCTTCTTTGAGGCCTACATCGGCAA
AATGAGGAAAACAACGAAAGCTGAATAGTGTGGAACTGAGGAGGAAGCCATAGCTCAGGGTCATCAAGAAAAAT
AATAGACAAAAGAAAATGGCACAAGGAATCACACGTGGTGCAGCTAAAACAAAACAAAACATGAGCAAACACAAA
ACCCAAGGCAGCTTAGGGATAATTAGGTTGATTTAACCCAGTAAGTTTATGATCCTTTTAGGGTGAGGACTCACT
GAGTGCACCTCCATCTCCAAGCACTGCTGCTGGAAGACCCCATTCCTCTTTATCTATCAACTCTAGGACAAGGG
AGAACAAAAGCAAGCCAGAAGCAGAGGAGACTAATCAAAGGCAAACAAAGGCTATTAACACATAGGAAAATATGT
ATTTACTAAGTGTACATTTCTCTAAGATGAAAGATTTTACTCTAGAACTGTGCGAGCACACACACAATC
CTTTCTAACTTTATGGACACTAACTGGAGCCAATAGAAAAGACAAAAATGAAAGAGACACAGGGTGTATATCTA
GAACGATAATGCTTTTGCAGAACTAAAGCCTTTTTAAGAAATGCCAGCTGCTGTAGACCCCATGAGAAAAGATG
TCTTAATCATCCTTATGAAAACAGATGTAAACAATAATTTCAACTAATTCATCTTCACTGCATAGCCTCAGG
CTAGTGAGTTTGCCAAAACCAAAGGGGTGAATACTTCCCAAGATTCTTCTGGGAGGATGGAACAGTGCAGC
CCAGGTCCCATGGGGGCAGCTCCATCCCAGAGCATTCTGATAGTTGAACTGTAATTTCTACTCTTAAGTGAGAT
ATGAAGTATTATCCTTTTGTTCAGTTGCCCGGGCTTTTGAACAGAAGAGTAAATACAGAATTGAAAAAGATAAA
CACTCAACCAAACAATGTGAAAACGGGTTCTGTAGTATTGTAAAAAGGCCCGGCCAGGACCACTGTGAGCTGG
AAAAGGGAGAAAAGGCAGTGGGAAAAGAGGTGAGCCGAAGATCAATTCGACAGACAGACGGTGTGTATGCCCTCC
CTGTTTGACTTCACACACACTCATAACTTTCCAAATGAAACCCACAGTATAGCGCATATTTTCGATATTTTGT
GAATTCCAAAAGGAAATCACAGGGCTGTTTCGAAATATTGGGGGAACACTGTGTTTCTGCATCATCTGCATTTGCT
CCCCAAGCAATGTAGAGGTGTTTAAAGGGCCCTCTGCTGGCTGAGTGGCAATACTACAACAACTTCAAGGCAAG
TTTGGCTGAAAACAGTTGACAACAAAGGGCCCCCATACTTATCCCTCAAATTTTAAAGTGATATGAAATACTTG
TCATGTCTTTGGCCAAATCAGAAGATATTATCCTGCTTCAAGTCAGCTTCAGAAATGTTTTAAAGGGACTTTA
GCTCTGGAACCTCAAAATCAATTTATTAAGAGCCATATTCTTTAAAAAAGCTGGATAATATTATCTGTAATA
TTTCAGTCCTTTACAAGCCAAATACATGTGTCAATGTTTCTAGTATTTCAAAGAAGCAATTATGTAAAGTTGTTT
AATGTGACATAATAGTATTATAATTGGTTAAGTAGCTTAATGATTAGGCAAACTAGATGAAAAGATTAGGGGCTT
CCACACTGCATAGATCACACGCACATAGCCACGCATACACACACAGACACACAGATGTGGGGTACACTGAATTTT
AAAGCCCCAATGAATAGAAACACATTTTCTGGCTAGCAGAAAAAACAACAACTGTTGTTTCTCTTTCTTG
CTTTGAGAGTGACAGTAAAAGGGATTTTTTCGAATTATTTTATATTATTTAGCTTTAATTGTGCTGTCGTTT
ATGAAACAGAGCTGCTCTGCTTTTCTGTGAGAGATGGCAAGGGCTTTTTTCAGCATCTCGTTTATGTGTGGAATTT
AAAAAGAATAAAGTTTATTCCATTCTGAAAAAAGAAAAA

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FIGURE 377

MNMSVLTLLQEEFEKQFNENEAIQWMQENWKKSFLLSALYAAFIFGGRHLMNKRAKFELRKPLVLWSLTLAVFSI
FGALRTGAYMVYILMTKGLKQSVCDQGFYNGPVSKEWAYAFVLSCAPELGDTIFIILRKQKLIFLHWYHHITVLL
YSWYSYKDMVAGGGWFMTMNYGVHAVMYSYYALRAAGFRVSRKFAMFITLSQITQMLMGCVVNYLVFCWMQHDQC
HSHFQNIWFSSLMYLSYLVLFCHFFFEAYIGKMRKTTKAE

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FIGURE 378

CGGGCACTCACCGTGTGTAGTTGGCATCTCCGCGCGTCCGGACACCCGATCCCAGCATCCCTGCCTGCAGGACTG
TTCGTGTTTCAGCTCGCGTCCTGCAGCTGTCCGAGGTGCTCCAGTTGGAGGCTGAGGTTCCCGGGCTCTGTCTGCTG
AGTGGGCGGGCGGCACCGCGGAGATGCCTGGGAAGAAGGCGCGCAAGAACGCTCAACCGAGCCCCGCGCGGGCTC
CAGCAGAGCTGGAAGTCGAGTGTGCTACTCAACTCAGGAGATTTGGAGACAACTGAAC TTCGGCAGAACTTC
TGAATCTGATATCCAACTCTTCTGCTCAGGAACCTGACTGCATCAAAAAC TTGCATGAGGGGACTCCTTCAAAA
GAGTTTTCTCAGGAGGTGCACGTTTCATCAATTTGAAGAAAGACTGCATTGTAATTGAGAGGAATGTGAAGGTGC
ATTCATGGGTGCCCTTGGAACGGAAGATGGAATACATCAAAGTGAATTTCTGTTCAAGTTTTCCAGATTATCA
TTCTTTGGGATGAGAGAACATTATAAAACCACTTTGTTTATTTTAAAGCAAGAATGGAAGACCCTTGAAAATAAA
GAAGTAATTATTGACACATTTCTTTTTTACTTAGAGAATCGTTCTAGTGTTTTTGCCGAAGATTACCGCTGGCCT
ACTGTGAAGGTAGATGACCTGTGATTAGACTGGGCGGCTGGGGAGAAACAGTTCAGTGCATTGTTGTTGTTGCTG
TTTTTGGTGTTTTGCTTTTCAGTGCCAACTCAGCACATTGTATATGATTTCGGTTTATACATATTACCTTGTTATA
ATGAAAAAACTCATTCTGAGAACACTGAAATGTTATACTCAGTGTTGATTTCTTCGGTCACTACACAACGTAAAA
TCATTTGTTTTCTTTTGACTCAAATTGTATTGCTTCTGTTTCAGATGATCTTTCATTCAATGTGTTCTGTTGGGCG
TTACTAGAAACTATGGAACACTGGAATAAATTTGAAAAAATTGGATAAAGTATAGGAGGGTTACTTGGGGCCA
GTAATCAGTAGACTGAACATTCAATATAATAAAGAACATGGGGATTTTGTATAACCAGGGATAATAAAAAGAA
AAAGAAGTTAATTTTTTAATTGATGTTTTTGAACCTTAGTAGAACAAATATTCAGAAGTAAC TTGATAAGATATGA
ATGTTTCTAAAGAGTTTCTAAAGGTTTCGAAATGCTCCTTGTCACATTAGTGTGCATCCTACAAAAGTGATCTCT
TAATGTAAATTAAGAATATTTTCATAATTGGAATATACTTTTCTTAAAAAAGGAACAGTTAGTTCTCATCTAG
AATGAAAGTTCCATATATGCATTGGTGAATATATATGTATACACATACTTACATACTTATATGGGTATCTGTATA
GATAATTTGTATTAGAGTATTATATAGCTTCTTAGTAGGGTCTCAAGTAAGTTCATTTTTTTTTATCTGGGCTATA
TACAGTCCTCAAATAAATAATGTCTTGATTTTATTTTCAGCAGGAATAATTTTATTTATTTTGCCTATTTATAATT
AAAGTATTTTTCTTTAGTTTGAAATGTGTATTAAAGTTACATTTTTTGAGTTACAAGAGTCTTATAACTACTTGAA
TTTTTAGTTAAATGTCTTAATGTAGGTTGTAGTCACTTTAGATGGAAAATTACCTCACATCTGTTTTCTTCAGT
ATTACTTAAGATTGTTTATTTAGTGGTAGAGAGATTTTTTTTTTCAGCCTAGAGGCAGCTATTTTACCATCTGGT
ATTTATGGTCTAATTTGTATTTAAACATATGCACACATATAAAAGTTGATACTGTGGCAGTAACTATTAAAAGT
TTTCACTGTT

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FIGURE 379

MPGKKARKNAQPSPARAPAELEVECATQLRRFGDKLNFRQKLLNLISKLFCSGT

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FIGURE 380

CGGGCACTCACCGTGTGTAGTTGGCATCTCCGCGCGTCCGGACACCCGATCCCAGCATCCCTGCCTGCAGGACTG
TTCGTGTTTCAGCTCGCGTCCTGCAGCTGTCCGAGGTGCTCCAGTTGGAGGCTGAGGTTCCCGGGCTCTGTCTGCTG
AGTGGGCGGGCGGCACCGGCGGAGATGCCTGGGAAGAAGGCGCGCAAGAACGCTCAACCGAGCCCCGCGCGGGCTC
CAGCAGAGCTGGAAGTCGAGTGTGCTACTCAACTCAGGAGATTTGGAGACAACTGAACTTCCGGCAGAACTTC
TGAATCTGATATCCAACTCTTCTGCTCAGGAACCTGACTGCATCAAAAACCTTGCATGAGGGGACTCCTTCAAAA
GAGTTTTCTCAGGAGGTGCACGTTTCATCAATTTGAAGAAAGACTGCATTGTAATTGAGAGGAATGTGAAGGTGC
ATTCATGGGTGCCCTTGGAACGGAAGATGGAATACATCAAGTGAATTTCTGTTCAAGTTTTCCAGATTATCA
TTCTTTGGGATGAGAGAACATTATAAAACCACTTTGTTTATTTTAAAGCAAGAATGGAAGACCCTTGAAAATAAA
GAAGTAATTATTGACACATTTCTTTTTTACTTAGAGAATCGTTCTAGTGTTTTGGCGAAGATTACCGCTGGCCT
ACTGTGAAGGTAGATGACCTGTGATTAGACTGGGCGGCTGGGGAGAAACAGTTCAGTGCATTGTTGTTGTTGCTG
TTTTTGGTGTTTTGCTTTTCAGTGCCAACTCAGCACATTGTATATGATTCCGTTTATACATATTACCTTGTTATA
ATGAAAAAACTCATTCTGAGAACACTGAAATGTTATACTCAGTGTGATTCTTCGGTCACTACACAACGTAAAA
TCATTTGTTTCTTTTGACTCAAATTGTATTGCTTCTGTTTCAGATGATCTTTCATTCAATGTGTTCTGTTGGGCG
TTACTAGAACTATGGAAAACTGGAAAATACTTTGAAAAAATTGGATAAAGTATAGGAGGGTTACTTGGGGCCA
GTAAATCAGTAGACTGAACATTCAATATAATAAAAGAACATGGGGATTTTGTATAACCAGGGATAATAAAAAGAA
AAAGAAGTTAATTTTAAATTGATGTTTTTGAACCTTAGTAGAACAAATATTCAGAAGTAACTTGATAAGATATGA
ATGTTTCTAAAGAGTTTCTAAAGGTTCGAAATGCTCCTTGTCACATTAGTGTGCATCCTACAAAAGTGATCTCT
TAATGTAAATTAAGAATATTTTCATAATTGGAATATACTTTTCTTAAAAAAAAGGAACAGTTAGTTCTCATCTAG
AATGAAAGTTCCATATATGCATTGGTGAATATATATGTATACACATACTTACATACTTATATGGGTATCTGTATA
GATAATTTGTATTAGAGTATTATATAGCTTCTTAGTAGGGTCTCAAGTAAGTTCATTTTTTTTTATCTGGGCTATA
TACAGTCTCATAATAATAATGTCTTGATTTTATTTTCAGCAGGAATAATTTTATTTATTTTGCCTATTTATAATT
AAAGTATTTTTCTTTAGTTTGAAATGTGTATTAAAGTTACATTTTTTGAGTTACAAGAGTCTTATAACTACTTGAA
TTTTTAGTTAAATGTCTTAATGTAGGTTGTAGTCACTTTAGATGGAAAATTACCTCACATCTGTTTTCTTCAGT
ATTACTTAAGATTGTTTATTTAGTGGTAGAGAGATTTTTTTTTTTCAGCCTAGAGGCAGCTATTTTACCATCTGGT
ATTTATGGTCTAATTTGTATTTAAACATATGCACACATATAAAAGTTGATACTGTGGCAGTAAACTATTAAAGT
TTTCACTGTT

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FIGURE 381

MPGKKARKNAQPSPARAPAELEVECATQLRRFGDKLNFRQKLLNLISKLFCSGT

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FIGURE 382

AGCCTGCCCTTGGGGCTGCCCCACGCCCCCTTCAGATCCTTTGCTCCGGAGAGAGACCTGTCCGAGCAGAGGCCTG
GACTACATCTCCCGGCGTGCTGGCAGTGTGGTGGCCTCTGTGCGCCGTCTGCACTCGTTGCAGGCGACGATGCA
GAGGGCTGTAAGTGTGGTGGCCCCGTCTGGGCTTTTCGCCTGCAGGCATTCCCCCGGCCCTTGTGTCTCCACTTAG
TTGCGCACAGGAGGTGCTCCGCAGGACACCGCTCTATGACTTCCACCTGGCCACGGCGGGAAAAATGGTGGCGTT
TGGCGGTTGGAGTCTGCCAGTGCAGTACCGGGACAGTCACACTGACTCGCACCTGCACACACGCCAGCACTGCTC
GCTCTTTGACGTGTCTCATATGCTGCAGACCAAGATACTTGGTAGTGACAGGTGTAAGCTGATGGAGAGTCTAGT
GGTTGGAGACATTGCAGAGCTAAGACCAAAACCAGGGGACACTGTCGCTGTTTACCAACGAGGCTGGAGGCATCTT
AGATGACTTGATTGTAACCAATACTTCTGAGGGCCACCTGTATGTGGTGTCCAACGCTGGCTGCTGGGAGAAAGA
TTTGGCCCTCATGCAGGACAAGGTGAGGGAGCTTCAGAACCAGGGCAGAGATGTGGGCTGGAGGTGTTGGATAA
TGCCCTGCTAGCTCTGCAAGGCCCCACTGCAGCCAGGTAACAGGCCGGCGTGGCAGATGACCTGAGGAACT
GCCCTTCATGACCAGTGCTGTGATGGAGGTGTTTGGCGTGTCTGGCTGCCGCGTGACCCGCTGTGGCTACACAGG
AGAGGATGGTGTGGAGATCTCGGTGCCGGTAGCGGGGAGTTACCTGGCAACAGCTATTCTGAAAAACCCAGA
GGTGAAGCTGGCAGGGCTGGCAGCCAGGGACAGCCTGCGCCTGGAGGCAGGCCTCTGCCTGTATGGGAATGACAT
TGATGAACACACTACACCTGTGGAGGGCAGCCTCAGTTGGACACTGGGGAAGCGCCGCCGAGCTGCTATGGACTT
CCCTGGAGCCAAGGTCATTGTTCCCCAGCTGAAGGGCAGGGTGCAGCGGAGGCGTGTGGGGTTGATGTGTGAGGG
GGCCCCCATGCGGGCACACAGTCCCATCCTGAACATGGAGGGTACCAAGATTGGTACTGTGACTAGTGGCTGCCC
CTCCCCCTCTCTGAAGAAGAAATGTGGCGATGGGTTATGTGCCCTGCGAGTACAGTCGTCCAGGGACAATGCTGCT
GGTAGAGGTGCGGCGGAAGCAGCAGATGGCTGTAGTCAGCAAGATGCCCTTTGTGCCACAACTACTATACCCT
CAAGTGAAGCTGGCTCAGGGTGGGGCTGTCCCTTCCAGGAGTTTTGCCCTACAAGGGGTTAGTCAAGAAGCTGA
GGCAGAACTCACTGGGGGTGGGCAGTTAAGGTGGAGGCTGATTCTAATTGTCTGGTTGAGGGGCCACACCACCTA
TTCCCCCACCTAACTCATGCCATTCCAGCTTCCTTCAGGACCCTGCTTCTGAGTGACGGACCAGCTCACACAAT
GTCTTGTTTCAGTCCATGATCCCACTGACCTACTCTTGCCCTGCTGGAGGGTAATGAGAAGCTTTGGTTCTGCCAT
CTCTCCCACTCTGCCAGGTGCTGGCTGTGGAGCAAAGGCTCACCTTTGTGGAGAGGATAAAACCTKCCCAACCTA
CCTCACCATGGTTTTTTCACATTGCAAAGGGTAATAACATGGGCAGTGCAGGACTTAGGCTACCCCTCCAGTTTGC
TTTCCGTAAATGCAAATTGTCCTTACTGCAAGTCAGGAATGATTGCTGACTCACAGTAGGGCTGCTATGCCTGTG
TGTAACCTTGGGGATGGCTGAGGGAACATAGACTCACTCTCCACATTCCAAGTTGGTCTAGTGTGCTGCCAG
TAGCAAACCATGGCAGACTACCCACCTATTCTGAGTTCCAGGGCTGCTGTAGGGCAGGGTGGGCTTCCTCCAGA
CTTGCTTACCCTGGGCTGATCTTTGCCCTGGTATGCATTAATGGACTCCACTGAATCCTGAAAAAAAAAATTAA
ACTTCCTTCTTACTTGCCA

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FIGURE 383

MQRAVS VVARLG FRLQAFPPALCRPLSCAQEVLRRTPLYDFHLAHGGKMVAFAGWSLPVQYRDSHTDSHLHTRQH
CSLFDVSHMLQTKILGSDRCKLMESLVVGDIAELRPNQGTLSLFTNEAGGILDDLIVTNTSEGHLYVVS NAGCWE
KDLALMQDKVRELQNQGRDVGLEVL DNALLALQGPTAAQVLQAGVADDLRKLPFM T SAVMEVFGVSGCRVTRCGY
TGEDGVEISVPVAGAVHLATAILKNPEVKLAGLAARDSLRLEAGLCLYGNDIDEHTTPVEGSLSWTLGKRRRAAM
DFPGAKVIVPQLKGRVQRRRVGLMCEGAPMRAHSPILNMEGTKIGTVTSGCPSPSLKKNVAMGYVPCEYSRPGTM
LLVEVRRKQQMAVVSKMPFVPTNYITLK

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FIGURE 384

AGCGCAGCACTCCCCGCTCGTTGGCCCGGGTATCCCAGCGCGGACCCACGCGATACGCTGACGCCCCGACGCCGA
TCCGGCCGAGCCAAGTAAGGGGGACGGCCCCGAGACGGAGAAGGGAGAGAGTGGGAGTTTCCCAGCCCCGAGAACT
TTCGAAGTTGAGAAGAGAACCCCTGGAACGTGCGCTCAGCACTGGGATTTTCTGGACTCAACGATGACTCTGAAT
AATGTCACCATGCGCCAGGGCACTGTGGGCATGCAGCCACAGCAGCAGCGCTGGAGCATCCCAGCTGATGGCAGG
CATCTGATGGTCCAGAAAGAGCCCCACCACTACAGCCACCGCAACCGCCATTCTGCTACCCCTGAGGACCACTGC
CGCCGAAGCTGGTCCCTCTGACTCCACAGACTCAGTCATCTCCTCTGAGTCAGGGAACACCTACTACCGAGTGGTG
CTCATAGGGGAGCAGGGGGTGGGCAAGTCCACTCTGGCCAACATCTTTGCAGGTGTGCATGACAGCATGGACAGC
GACTGCGAGGTGCTGGGAGAAGATACATATGAACGAACCCCTGATGGTTGATGGGGAAAGTGCAACGATTATACTC
CTGGATATGTGGGAAAATAAGGGGGAAAATGAATGGCTCCATGACCACTGCATGCAGGTCGGGGACGCATACCTG
ATTGTCTACTCAATCACAGACCGAGCGAGCTTCGAGAAGGCATCTGAGCTGCGAATCCAGCTCCGCAGGGCCCCGG
CAGACAGAGGACATTCCCATAATTTTGGTTGGCAACAAAAGTGACTTAGTGCGGTGCCGAGAAGTGTCTGTATCA
GAGGAGAGCCTGTGCAGTGGTGTGTTGACTGCAAGTTCATCGAGACCTCTGCAGCTGTCCAGCACAACTGAAG
GAGCTGTTTGAGGGCATTGTGCGACAGGTGCGCCTTCGGCGGGACAGCAAGGAGAAGAATGAACGGCGGCTGGCC
TACCAGAAAAGGAAGGAGAGCATGCCCAGGAAAGCCAGGCGCTTCTGGGGCAAGATCGTGGCCAAAAACAACAG
AATATGGCCTTCAAGCTCAAGTCCAAATCCTGCCATGACCTCTCTGTACTCTTAGGAACCCAGGGTCACCCAGATG
TCCCTTTGATGGCCCTTGTTGAAGGCCATTGGGACCAATAATCTATATTAGATTGAATACTTAAGTTAGATGTGG
TTTCCCCCATTGTAGCAGGGAGCTAGCGTATTAGCCTTGTTGGGCAACATGATGCATGGGAAATGAAAGATTTTTG
TAAAAAGTCAGTATTTATTTCCAGGAAAAGCCTGACCTTGCTATTTGAACACCCAAGACTCTTTAGAGGATGTGT
TTGGTGTTCACATGTGTTTCTTCTATTTTGGATAGTAGGGAAAGTAAAGCTTACAAAGAATGCCTAGAACAAGAAC
TTTTCATCATTAATAATTTTCCCAGTGTTCTGATATGTGACTTTGAGGCCAATGAGTCATAAACAAATATAAGA
AAGCTGTCAATGAGTTTCTTCAAAGGAGGGAAAACTTTCTACGAATCTAAGATCCATGGAGCTAGAATTGTAGAA
CTAGGCTCATCAGAATCGTGAATATTATTGCTCCATCAAACCTGTGAAAAGAAATGATGTGGACCTTGCTGGAAAC
AAAGGCTTAGCAAACAATTTTTGTTCAATGCCACCGAGACATATAGAATTGGGAACGATAACATGTGTCCCTTA
TAGGCTCAAAAATTATATCTTACAATTTCTTATTTAGGGGGAAATTATTTGAATCAGATTCTATTTAGTCAAACC
ACCTTTTATGTTTTATTATTTTTGAATTCATGGAGCCATCATAAAAAATTTTTTAAAATCAGAATTATTGATACC
CTGTAGTGCAAAATGTCAATTTTTAATGTATAATCAGAAGTCTGAATTTTCATAAAACATATAGCATAAAAAACCT
CCAGTACTTTGGTTGACCCTTGATGTACAGCTCTGCTCTATTTATTATTTTGGCAAAATAACCATTTTAAC
ATTTGATAAAGCATATTTATGAACATATTTCTTAATAAGAAAAATATCCATTTTATTACCATTTTCTATCTTTT
CAAAATATGCAAGTTTTTACCTATATGTCTTATAATAAAGAAATAAAATATTTGA

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FIGURE 385

MTLNNTMRQGTVGMQPQQQRWSIPADGRHLMVQKEPHQYSHRNRHSATPEDHCRRSWSSDSTDVVISSESGNTY
YRVVLIGEQQGVGKSTLANIFAGVHDSMDS DCEVLGEDTYERTLMVDGESATIILLDMWENKGENEWLHDHCMQVG
DAYLIVYSITDRASFEKASELRIQLRRARQTEDIPIILVGNKSDLVRCREVS VSEGRACAVVFDCKFIETSAAVQ
HNVKELFEGIVRQVRLRRDSKEKNERRLAYQKRKESMPRKARRFWGKIVAKNNKNMAFKLKS KSDLSVL

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FIGURE 386A

ACGTTGCCCCGGGATGCGGACAGGTTCCGCGCCTCCAGCGCCCCATCCTGAGCCGATTATCTGCAATTATGAAAT
GAAGTAACTCAAGATGAGCAAGTTAAAAGTGATACCAGAAAAAGCCTTACCAATAATTCTAGGATCGTAGGACT
CCTGGCTCAACTGGAGAAGATCAATGCTGAGCCTTCAGAATCAGACACTGCCCCGATATGTTACATCAAAAATTCT
TCATCTGGCTCAGAGTCAAGAAAAACAAGGAGAGAAATGACAGCCAAAGGTTCTACAGGAATGGAAATTCTGCT
GTCAACATTAGAGAACACAAAAGATCTTCAAACCTACACTTAATATCTTAAGCATTCTTGTGAGCTGGTGTGAGC
TGGTGGAGGTCGAAGAGTGAGTTTCTTAGTCACCAAAGGTGGTTCACAAATATTGTTGCAGTTACTTATGAATGC
CAGCAAAGAATCTCCCCCACATGAGGACTTAATGGTACAGATTCACTTCTATTCTTGCAAAGATTGGACCAAAAGA
TAAAAAATTTGGAGTAAAGGCTAGAATTAATGGGGCTCTGAATATAACCTGAATTTGGTCAAGCAGAATTTGCA
GAATCATCGCTTGGTCTACCTTGCCTTCAGCTTTTACGAGTATATTCTGCCAACTCTGTGAATTCAGTATCCTT
AGGGAAAAATGGAGTTGTGGAACCTGATGTTTAAAATCATTGGACCATTTAGTAAGAAGAATTCAGTCTTATAAA
GGTTGCTTTAGACACTCTTGTGCTGCTGCTAAAATCAAAAACAAATGCCAGGAGAGCTGTAGACAGAGGATATGT
CCAAGTGCTTTTAAACAATTTATGTAGATTGGCACCAGCATGATAACCGGCATAGAAACATGCTCATTCCGAAAGG
AATTTTACGGAGTTTAAAAAGTGTTACAAACATCAAGTTGGGAAGAAAAGCATTTATTGATGCCAATGGGATGAA
AATTCTGTATAATACTTCGCAATTGCCTGTTATTCTGTGACTGGTCTGTGGCTCAGCTCTACAGCTTACCTCC
TGAAGTGGATGACGTAGTAGATGAAAGTGATGACAACGATGATATTGATGTAGAAGCTGAAAACGAAACTGAGAA
TGAAGATGACCTAGATCAAAATTTTAAAGATGATGATATTGAAACAGATATTAACAACTAAAACCCAGCAAGA
ACCGGGACGAACAATAGAAGATCTAAAATGTATGAACACCTTTTCCCTGAGCTTGTGATGATTTTCAGGACTA
TGATTTAATCTCCAAAGAACCAAGCCTTTTGTATTTGAGGGAAAAGTACGTGGTCTTATTGTTGTTCTACGGC
AGGCGAGGGAACATCTGGGAATTCTGGCAATTTAAGAAAAGTTGTAATGAAGGAGAACATATCTTCTAAAGGAGA
TGAAGGTGAAAAGAAGTCTACCTTTATGGATCTAGCAAAAAGAAGATATTAAAGATAATGATAGAACATTACAACA
GCAGCCAGGTGATCAAAATAGAACTATTTTCATCAGTCCATGGTTTAAACAATGATATTGTAAAGGCCTTGGACCG
AATTACATTGCAGAAATATTCCTTCTCAAACAGCCCCAGGTTTTACTGCAGAAATGAAGAAGGACTGCAGTCTTCC
TCTTACTGTCTTACCTGTGCTAAAGCATGTCCACACATGGCTACTTGTGGAATGTTCTGTTTGAGGGAAGAAC
AGTTCAGCTAGGGAAGCTTTGCTGCACTGGAGTTGGAACCTGAAGATGATGAAGATACTGAGTCAAATTCATCGGT
AGAACAAGCATCGGTTGAAGTACCTGATGGACCAACACTCCATGACCCAGACCTCTATATTGAGATTGTGAAAAA
TACGAAGTCTGTCCAGAAATATTTCAGAGGTGGCTTATCCCGATTATTTTGGTCACATTCCGCTCCATTCAAAGA
GCCATATTTTAGAAAGGCCTTATGGTGTACAAAGGACAAAAATTGCTCAAGATATTGAAAGGCTAATACATCAGAG
TGATATCATAGATCGTGTGGTATATGACTTGGATAACCCAAATTACACCATCCAGAAGAGGGAGATATTTTGAA
ATTTAACTCCAAATTTGAGTCTGGGAATCTGCGCAAAGTAATTCAAATTAGAAAAAATGAATATGATCTTATTCT
GAACTCAGACATAAACAGCAATCATTATCATCAGTGGTTTTACTTTGAAGTCAGTGGAATGCGACCAGGTGTTGC
TTACAGGTTTAAACATCATTAACTGTGAAAAGTCCAACAGTCAGTTTAAATTATGGTATGCAACCACTCATGTATTC
GGTTCAGGAAGCATTAAATGCCAGACCATGGTGGATTTCGTATGGGGACTGACATTTGTTACTATAAAAAATCATT
CTCAAGAAGTTCAGTTGCTGTCAGGTGGGCAAAAGGGAAAATCCTACTATACAATTACATTTACTGTCAATTTTCC
ACATAAAGATGATGTTTGCTACTTTGCTTATCACTATCCATATACGTATTCACTTTACAGATGCATCTTCAAAA
ATTGGAATCAGCACACAATCCTCAGCAAATCTATTTTCGGAAAGATGTGTTATGTGAAACCCCTGTCTGGAAACAG
CTGCCCCCTGGTGACTATAACAGCAATGCCAGAGTCTAATTATTATGAACATATCTGCCATTTAGAAATCGCCC
TTACGTTTTCTTGTCTGCTCGGGTACATCCTGGAGAACTAATGCAAGTTGGGTTATGAAAGGAACGTTGGAATA
TCTCATGAGCAATAACCCCACTGCTCAGAGCTTACGAGAATCTTATATTTTAAAATTGTCCCTATGTTAAATCC
AGATGGTGTGTCATCAATGGAAATCATCGCTGTTCTTTAAGTGGAGAGGATTGGAATAGGCAGTGGCAAAGTCCAAG
TCCGGATTTACATCCTACAATTTACCATGCTAAGGGGCTGTTGCAATACTTGGCTGCAGTGAAGCGTTTACCCCT
GGTTTATTGTGATTATCATGGCCATTCCCGAAAGAAGAATGTATTTATGTATGGTTGCAGCATCAAAGAGACAGT
GTGGCATACCAATGATAATGCAACTTCATGTGATGTTGTGGAGGATACGGGATACAGGACATTGCCTAAGATACT
GAGCCATATCGCCCCAGCATTTTGCATGAGCAGCTGTAGCTTCGTAGTGGAAAAATCTAAAGAATCCACAGCACG
TGTTGTAGTTTGGAGGGAAATAGGAGTACAAAGAAGTTATACCATGGAGAGTACTTTATGTGGCTGTGATCAGGG
AAAATACAAGGGTTTACAGATTGGTACCCGAGAAGTGAAGAGATGGGAGCAAAATTTTGTGTTGGTCTTTTACG
TTGAAAAGACTGACCTCTCCATTGGAGTATAATCTGCCTTCCAGCCTGCTTGACTTTGAAAATGATTTAATTGA
ATCAAGCTGCAAAGTAACTAGCCCTACCACTTATGTCTTGGATGAAGATGAACCTCGATTCTTGAAGAAGTTGA
TTACAGTGCAGAAAGTAATGATGAGTTAGATATTGAGTTGGCTGAAAATGTAGGAGATTATGAACCTTCTGCTCA

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FIGURE 386B

AGAAGAAGTACTTTCTGACTCTGAATTATCAAGAACATACCTACCTTGAGCCCGCTGCCATCTCTTGTTAACTGC
AAAGAATAAATGAAATATCTTGGTTTTATTTCCTCCAGGAAGCTTGAGAGAAATGAGTTTATACAGAGCTGACTCA
AAAAGACAAAAAGTAACTTGGGCCAGTTTGGTTTCAAGATAATAAATGTGTTATTAATTAATGATAAAATTGGCG
CTTGTTTTATTTTCGATATTCAATGCACTTTATGTAGCATTGAATGATCAAATATTGGATTTACCTTTAAAAAAA
AAAAACCTGAGTATCATTGCATGAATTTTTATCTCCCTATGGTTATATCCTGCATCAAGTGGATAATTTTGAAGT
GTGTTTCAGAAATATAAAATTGAAATTTTAGAGTTGTTGAAAATCCTGACTTGTTGAAAACTAATATATATGTACAT
GGATTTCTATAGATGTGTTTGTGTTAGAAAGTGGGTAGATATTGCAGATAAGACTGTTCTTCAGAATCATGTAACT
ATTGGGTTGTGACTGAAGTAGTGCAGGGTTTGCCTTGAAACCATTACATTCTACATTTACCAAATTAACAAATA
AAACTGTATTAAATGTTGC

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FIGURE 387

MSKLVKVIPEKSLTNNRIVGLLAQLEKINAEPSESDTARYVTSKILHLAQSQEKTRREMTAKGSTGMEILLSTLE
NTKDLQTTLNILSILVELVSAGGGRRVSFLVTKGGSQILLQLLMNASKESPPEHEDLMVQIHSILAKIGPKDKKFG
VKARINGALNITLNLVKQNLQNHRLVLPCLQLLRVYSANSVNSVSLGKNGVVELMFKIIIGPFSKKNSSLIKVALD
TLAALLKSKTNARRAVDRGYVQVLLTIYVDWHRHDNRHRNMLIRKGILRSLKSVTNIKLGRKAFIDANGMKILYN
TSQLPVIPVTGPVAQLYSLPPEVDDVVDESDDNDDIDVEAENETENEDDLQNFKNDDIETDINKLKPQQEPGRT
IEDLKMYEHLFPELVDDFQDYDLISKEPKPFVFEGKVRGPVVPVPTAGEGTSGNSGNLRKVVMKENISSKGDEGEK
KSTFMDLAKEDIKDNDRTLQQQPGDQNRTISSVHGLNNDIVKALDRITLQNIPSQTAPGFTAEMKKDCSLPLTVL
TCAKACPHMATCGNVLFEGRTVQLGKLCCTGVGTEDDETESNSSVEQASVEVPDGP TLHDPDLYIEIVKNTKSV
PEYSEVAYPDYFGHIPPPFKEPILERPYPGVQRTKIAQDIERLIHQSDIIDRVVYDLDNPNYTIPEEGDILKFNSK
FESGNLRKVIQIRKNEYDLILNSDINSNHYHQWFYFEVSGMRPGVAYRFNIINCEKSNSQFNFGMQLMYSVQEA
LNARFWWIRMGTDICYKYNHFSRSSVAAGGQKGKSYTITFTVNFPHKDDVCYFAYHYPTYSTLQMHQLQKLESA
HNPQQIYFRKDVLCETLSGNSCPLVTITAMPESNYEYEHICHFRNRPYVFLSARVHPGETNASWVMKGTLEYLMSN
NPTAQSLRESYIFKIVPMLNPDGVINGNHRCSLSGEDLNQWQSPSPDLHPTIYHAKGLLQYLAAVKRLPLVYCD
YHGHSRKKNVFMYGCSIKETVWHTNDNATSCDVVEDTGYRTL PKILSHIAPAFCMSSCSFVVEKSKESTARVVVW
REIGVQRSYTMESTLCGCDQGYKGLQIGTRELEEMGAKFCVGLLRRLKRLTSPLEYNLPSSLLDFENDLIESSCK
VTSPTTYVLDEDEPRFLEEVDYSAESNDELDIELAENVGDYEPSAQEEVLSDSELSRTYLP

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FIGURE 388

GGCGGACGCTGGAAAGCGCCGTTCTGACTCTAATGTACTTAGACACTTGAAGCCACAAAAGGATTTATCCCCGA
GGTTCCTCATCTGCTCGCGAGGATGCCTTTTCTCTTCTGCCTTGCGAAATAACAGCAGCCTAGCTGTTGCCCGTG
ACCAGTGAGAAAGGCAGCGTCGCGGGCTGATTAGGTTTACCCAAAGGGTGCCGGCGCCGAATTGGTTTTCTAACG
AGAACTTTTAAAATGATCCGTTCCAAAAAAGGGTAGGAGCCGCGAGACCTCCAAGTGGCCAGAGAAAACAAGTC
TCGTCTGGCAAAGTTCTCGGCCCCACGCGGTCCGCGGCCAAGGGCCAACGGTCCCTCGCCCCACGTTGCCCGCAGCA
CTGCGCGTGCGCGAGCCGCTGTCAAACGCGCTGACGGAGGCCGAGAAGAAAAAAGGCGGGAGCCGTCATCCCG
GGTTGAGCAAAATGGCGCGGGGAGAAGGAGATGCAGGAGTTCACCCGTAGCTTCTTCCGAGGCCGCCCGGACCTCA
GCACGCTTACGCATTCCATCGTGCGGCGGAGGTACTTAGCTCACTCGGGCCGCAGCCACCTGGAGCCCGAGGAGA
AGCAGGCACTGAAGCGGCTGGTGGAGGAGGAGCTGCTGAAGATGCAGGTGGATGAAGCCGCTTCCAGGGAAGACA
AACTGGACCTTACCAAGAAGGGCAAGAGGCCTCCCACCCCTTGTAGCGACCCGGAGAGAAAAAGGTTCCGCTTCA
ATTGAGAGTCGGAGTCCGGCTCTGAAGCCTCCAGCCCAGACTACTTTGGACCCCGAGCAAGAATGGGGTGGCAG
CAGAAGTCAGCCAGCCAAAGAGGAGAATCCAAGGCGAGCCTCAAAGGCAGTTGAGGAGAGCAGTGATGAGGAAC
GGCAGAGGGACCTGCCCCACAGAGGGGAGAGGAGAGCAGTGAGGAGGAGGAAAAGGGGTACAAGGGGAAGACTA
GGAAGAAACCTGTGGTAAAGAAGCAGGCACCAGGCAAGGCCTCAGTCAGTAGGAAGCAGGCCAGGGAAGAAAGTG
AGGAGAGCGAGGCAGAACCCGTTGAGAGGACAGCAAGAAGGTGGAGGGAAATAAAGGAAGTAAAGCCTGAAGG
AAAGTGAACAGGAGAGTGAAGAGGAGATCCTAGCCCAGAAGAAAGAGCAGAGAGAGGAGGAAGTGGAGGAGGAAG
AGAAAGAAGAGGATGAGGAAAAGGGGGATTGGAAACCCAGAACCAGGAGCAATGGCCGGAGAAAGTCAGCTAGGG
AGGAGAGGAGCTGTAAGCAGAAAAGCCAGGCAAAGAGGCTCTTGGGAGACTCAGACAGCGAGGAAGAGCAGAAAG
AGGCAGCCAGCAGTGGGGATGACAGTGGGAGAGATAGAGAACCCCCAGTGCAGAGGAAGAGTGAGGACAGGACCC
AGCTTAAGGGTGGGAAGAGGTTGAGTGGAAAGCAGCGAGGACGAGGAAGACAGTGGGAAGGGGGAACCCACAGCTA
AAGGCTCTAGAAAGATGGCCAGACTGGGCAGCACCAGTGGTGGGAAAGTGAAGTGGAGAGGGAGGTAAGTGACA
GCGAGGCAGGGGGAGGCCCCAGGGGGAGAGGAAGAACCCTCTTCCAAGAAGAGCTCCAGGAAAGGCAGGACAC
GAAGCTCCTCTTCTCCTCAGATGGAAGTCCAGAGGCCAAAGGAGGGAAGGCTGGCTCAGGTCGCCGTGGAGAGG
ACCACCCGGCTGTGATGAGGCTGAAGCGCTACATTCGGGCCCTGTGGTGCCATCGAAACTACAAGAAGCTGTTGG
GCTCCTGTTGCTCACACAAGGAGCGCCTGAGTATCCTCCGGGCAGAACTGGAAGCGCTAGGCATGAAGGGTACCC
CTTCCCTAGGGAAGTGTGCGGGCCCTGAAGGAGCAGAGGGAGGAGGCAGCTGAGGTGGCCTCCTTGGATGTTGCGA
ACATCATCAGTGGCTCGGGCCGGCCACGCAGACGTACAGCCTGGAACCCCTTAGGAGAAGCAGCACCCCCAGGGG
AGCTGTACCGACGGACCCTGGACTCAGATGAAGAGCGGCCCCGTCCCGCACCCCCAGACTGGTCACATATGCGTG
GCATCATCAGCAGTGATGGCGAGAGTAAGTGAAGCTCTGCCACCCCCAGGAGGGACCCTTGATACATGTACAAAGC
ATACATAGCACCCCTTGCCCTGTGTCTGTGGAACAGAAGCAGCTTCCTTCAGAGAAGACTGCAGCTCCCAAGGAC
ACAAGCTGTTGGGATGCTACTTCTCAGCTTTCAGCTGTCCCTTTAAGGTGTTTATTTTTTAAGACTCAATAAAGG
AGTGTTTTTAATCACCTCAAAAAAAA

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FIGURE 389

MAREKEMQEFTRSFFRGRPDLSLTHSIVRRRYLAHSGRSHLEPEEKQALKRLVEEELLKMQVDEAASREDKLDL
TKKGKRPPTPCSDPERKRFRFNSESESGSEASSPDYFGPPAKNGVAAEVSPAKEENPRRASKAVEESSDEERQORD
LPAQRGEESSEEEKGYKGKTRKKPVVKKQAPGKASVSRQAREESESEAEQVQRTAKKVEGNKGTKSLKESEQ
ESEEEILAQKKEQREEEVEEEKEEDEEKGDWKPRTSNGRRKSAREERSCKQKSQAKRLLGDSDEEEQKEAAS
SGDDSGRDREPPVQRKSEDRTQLKGGKRLSGSSEDEEDSGKGEP TAKGSRKMARLGSTSGEESDLEREVSDSEAG
GGPQGERKNRSSKKSSRKGRTRSSSSSSDGSPKAGGKAGSGRRGEDHPAVMRLKRYIRACGAHRNYKKLLGSCC
SHKERLSILRAELEALGMKGTPSLGKCRALKEQREAAAEVASLDVANIISGSGRPRRRRTAWNPLGEAAPPGELYR
RTLDSDEERPRPAPPDWSHMRGIISSDGESN

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FIGURE 390

CTCCCTTTGGGCAAGGACCTGAGACCCCTGTGCTAAGTCAAGAGGCTCAATGGGCTGCAGAAGAACTAGAGAAGG
ACCAAGCAAAGCC**ATG**ATATTTCCATGGAAATGTCAGAGCACCCAGAGGGACTTATGGAACATCTTCAAGTTGTG
GGGGTGGACAATGCTCTGTTGTGATTTCCTGGCACATCATGGAACCGACTGCTGGACTTACCATTATTCTGAAAA
ACCCATGAACTGGCAAAGGGCTAGAAGATTCTGCCGAGACAATTACACAGATTTAGTTGCCATACAAAACAAGGC
GGAAATTGAGTATCTGGAGAAGACTCTGCCCTTTCAGTCGTTCTTACTACTGGATAGGAATCCGGAAGATAGGAGG
AATATGGACGTGGGTGGGAACCAACAAATCTCTTACTGAAGAAGCAGAGAAGTGGGGAGATGGTGAGCCCAACAA
CAAGAAGAACAAGGAGGACTGCGTGGAGATCTATATCAAGAGAAACAAAGATGCAGGCAAATGGAACGATGACGC
CTGCCACAAACTAAAGGCAGCCCTCTGTTACACAGCTTCTTGCCAGCCCTGGTCATGCAGTGGCCATGGAGAATG
TGTAAGAAATCATCAATAATTACACCTGCAACTGTGATGTGGGGTACTATGGGCCCCAGTGTCAGTTTGTGATTCA
GTGTGAGCCTTTGGAGGCCCCAGAGCTGGGTACCATGGACTGTACTCACCCCTTTGGGAACTTCAGCTTCAGCTC
ACAGTGTGCCTTCAGCTGCTCTGAAGGAACAACTTAACTGGGATTGAAGAAACCACCTGTGGACCATTGTGAAA
CTGGTCATCTCCAGAACCAACCTGTCAAGTGATTCAAGTGTGAGCCTCTATCAGCACCAGATTTGGGGATCATGAA
CTGTAGCCATCCCCTGGCCAGCTTCAGCTTTACCTCTGCATGTACCTTCATCTGCTCAGAAGGAAGTGAATTAAT
TGGGAAGAAGAAAACCAATTTGTGAATCATCTGGAATCTGGTCAAATCCTAGTCCAATATGTCAAAAATTGGACAA
AAGTTTCTCAATGATTAAGGAGGGTGATTATAACCCCTCTTCATTCCAGTGGCAGTCATGGTTACTGCATTCTC
TGGGTTGGCATTATCATTTGGCTGGCAAGGAGATTAAAAAAGGCAAGAAATCCAAGAGAAGTATGAATGACCC
ATAT**TAA**ATCGCCCTTGGTGAAAGAAAATTCTTGGAATACTAAAAATCATGAGATCCTTTAAATCCTTCCATGAA
ACGTTTTGTGTGGTGGCACCTCCTACGTCAAACATGAAGTGTGTTTTCTTCAGTGCATCTGGGAAGATTTCTACC
TGACCAACAGTTTCCTTCAGCTTCCATTTGCCCCCTCATTTATCCCTCAACCCCCAGCCACAGGTGTTTATACAG
CTCAGCTTTTTGTCTTTTCTGAGGAGAAACAAATAAGACCATAAAGGGAAAGGATTCATGTGGAATATAAGATG
GCTGACTTTGCTCTTTCTTGACTCTTGTTTTCAGTTTCAATTCAGTGTGTACTTGATGACAGACACTTCTAAAT
GAAGTGCAAATTTGATACATATGTGAATATGGACTCAGTTTTCTTGAGATCAAATTTACGTCGTCTTCTGTAT
ACTGTGGAGGTACACTCTTATAGAAAGTTCAAAAAGTCTACGCTCTCCTTTCTTTCTAACTCCAGTGAAGTAATG
GGGTCCTGCTCAAGTTGAAAGAGTCCTATTTGCAGTGTAGCCTCGCCGTCTGTGAATTGGACCATCCTATTTAAC
TGGCTTCAGCCTCCCCACCTTCTTCAGCCACCTCTCTTTTTTTCAGTTGGCTGACTTCCACACCTAGCATCTCATGA
GTGCCAAGCAAAAAGGAGAGAGAGAGAAATAGCCTGCGCTGTTTTTTAGTTTGGGGGTTTTGCTGTTTCCTTTTA
TGAGACCCATTCTATTTCTTATAGTCAATGTTTTCTTTTATCACGATATTATTAGTAAGAAAACATCACTGAAAT
GCTAGCTGCAAGTGACATCTCTTTGATGTGCATATGGAAGAGTTAAAACAGGTGGAGAAATTCCTTGATTACAAT
GAAATGCTCTCCTTTCCCTGCCCCCAGACCTTTTATCCACTTACCTAGATTCTACATATTCTTTAAATTTTCATC
TCAGGCCTCCCTCAACCCCACTTCTTTTATAACTAGTCCTTTACTAATCCAACCCATGATGAGCTCCTCTTC
CTGGCTTCTTACTGAAAGGTTACCCTGTAACATGCAATTTGCATTTGAATAAAGCCTGCTTTTTAAGTGTTAA

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FIGURE 391

MIFPWKCQSTQRDNLWNIFKLWGWTMLCCDFLAHHGTDWCWYHYSEKPMNWQRARRFCRDNYTDLVAIQNKAEIEY
LEKTLPFSSRSYYWIGIRKIGGIWTWVGTKSLTEEAENWGDGEPNNKKNKEDCVEIYIKRNKDAGKWND DACHKL
KAALCYTASCQPWSCSGHGECVEIINNYTCNCDVGYYGPQCQFVIQCEPLEAPELGTMDCTHPLGNFSFSSQCAF
SCSEGTNLTGIEETTCGPFGNWSSPEPTCQVIQCEPLSAPDLGIMNC SHPLASF SFTSACTFICSEGTELIGKKK
TICESSGIWSNPSPICQKLDKSFSMIKEGDYNPLFIPVAVMVTAFSGLAFIIWLARRLKKGKSKRSMNDPY

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FIGURE 392A

AACTCATGCGGCCAGAGCGGGAAAGAGACTCGTCTTTGCGTCCGAGTTCTGGAGCCGCCGCACCCCGACTCCTGG
GGCCGCGGCAGCGGCTGCGAGGGGACGGGCGTCCGCTGTCTCCTGGGTTCCTCTCGTAGCGACCCGCGGGATCGG
AAAAAAAGGAGAAGATGAGGAGGAGGGTGGCAGCAGCGGCGGCCGCGGGGACCAGCGCGGACGGCGGGCAGC
GAGGAGAGCAGCTCCTCACTGTCAAGCACGAGCTGCGGACTGCTAATTTGACAGGACATGCTGAGAAGGTGGGAA
TAGAAAAATTTGAGCTCCTGAAGGTCCTAGGAACTGGAGCTTATGGAAAAGTATTTCTAGTTTCGTAAATAAGTG
GCCATGATACTGGAAAGCTGTATGCCATGAAAGTTTTGAAAAAGGCAACAATCGTTCAAAGGCCAAAACACAG
AGCATACAAGGACAGAACGACAAGTCCTGGAACACATTAGGCAGTCGCCATTTTGGTAAACATTACATTATGCTT
TCCAGACAGAAACCAAACCTTCATCTCATTTTAGATTATATAAATGGTGGTGAACCTTTTACTCATCTTTCTCAA
GAGAGCGTTTCACAGAGCATGAGGTGCAGATTTATGTTGGAGAGATTGTGCTTGCCCTCGAACATCTCCACAAGT
TGGGGATTATATATCGTGATATTAAGCTTGAGAATATTCTACTTGATTCTAATGGCCATGTGGTGCTGACAGATT
TTGGTCTGAGTAAGGAGTTTGTGGCTGATGAACTGAAAGAGCATATTCCTTTTGTGGAACATTGAATACATGG
CACCAGATATTGTCAGAGGGGGAGATTCAGGACATGACAAGGCAGTTGACTGGTGGAGTTTGGGTGTTCTAATGT
ATGAATTACTAAGTGGAGCATCTCCTTTCACTGTTGATGGAGAAAAAATTCCTAAGCTGAGATATCTAGGAGAA
TATTAAGAGTGAGCCTCCATATCCCCAAGAAATGAGTGCTTTAGCGAAAGACCTAATTCAGCGTCTTTTGATGA
AAGATCCCAAGAAGAGATTGGGATGTGGTCCACGTGATGCAGATGAAATCAAAGAACATCTCTTTCTTCAGAAAA
TAAATTGGGATGATTTAGCCGCCAAAAAAGTGCTGCACCATTTAAGCCAGTCATTGAGATGAATTAGATGTGA
GTAACCTTGCAGAAGAGTTCACAGAAATGGATCCCACTTATTCTCCCGCAGCCCTGCCCCAGAGTTCTGAGAAGC
TGTTTCAGGGCTATTCTTTGTTGCTCCTTCCATCTATTCAAGCGTAATGCAGCTGTATAGACCCTCTTCAGT
TTCACATGGGAGTTGAACGTCTGGAGTGACAAATGTTGCCAGGAGTGCAATGATGAAGGACTCTCCATTCTATC
AACACTATGACCTAGATTGGAAGGACAAACCCCTGGGAGAAGGTAGTTTTTCAATTTGTGCGAAAGTGTGTGCATA
AAAAAAGTAACCAAGCTTTGCAAGTCAAATAATCAGCAAAAAGGATGGAAGCCAATACTCAAAGGAAATAACAG
CTCTGAAACTCTGTGAAGGACACCCCAATATTGTGAAGTTGCATGAAGTTTTTCATGATCAGCTTCACACGTTTC
TAGTGATGGAACCTCTGAATGGAGGAGAAGTGTGACGCATTAAGAAAAAGAAGCACTTCAGTGAGACGGAAG
CCAGCTACATCATGAGGAAGCTTGTTTCAGCTCTAAGCCACATGCATGATCTTGGAGTGGTGCACAGGGATCTGA
AACCTGAGAATTTATTGTTACCGATGAAAATGACAATTTGGAATTAATAATTGATTTTGGATTTGCACGGC
TAAAGCCACCGGATAATCAGCCCTGAAGACTCCATGCTTCACCCCTCATTGATGCCGCCAGAGCTCTTGAATC
AGAACGGCTACGATGAGTCTGTGACCTGTGGAGCTTGGGCGTCATTTGTACACAATGTTGTGAGGACAGGTTT
CCTTCCAATCTCATGACCGAAGTTTGACGTGTACCAGCGCGGTGGAATCATGAAGAAAATTAAGGGGAGATT
TCTCCTTTGAAGGAGAAGCCTGGAAGAATGTATCCCAAGAGGCTAAAGATTTGATCCAAGGACTTCTCACAGTAG
ATCCAAACAAAAGGCTTAAATGTCTGGCTTGAGGTACAATGAATGGCTACAAGATGGAAGTCAGCTGTCTCTCA
ATCCTCTGATGACTCCGGATATTCTAGGATCTTCCGGAGCTGCCGTGCATACCTGTGTGAAAGCAACCTTCCACG
CCTTTAACAATAACAAGAGAGAGGGGTTTTGCCTTCAGAAATGTTGATAAGGCCCTTTGGCTAAGAGAAGAAAA
TGAAAAAGACTAGCACCAAGTACCGAGACGCGCAGAGGGTCCAGTGAGAGTTCCCATCTCTCTCTCATTCTC
ACGGTAAACTACACCCACCAAGACTGCAGCCAGCAATCCTGCCGACAGCAATAACCCGGAGACCCTCTTCC
AGTCTCGGACTCAGAGCTTAGGCATGGTAGGAGTGATCAGTGATCCATTGCACCTTTATTCCTCAGCATATGC
CTGAGTCGATCTTTTATGCTTTTAAAAATGTTTCCCGTTGGTCTCATTTGGAATCTGCCTCCTAATGATTTTTTTC
AGGAAAACCTGTTTGTTATCCTCATTCAAAGCACTGGACAGAGAATGTTACTGTGAATAGAGCACATATTACT
CTTTTACGAACCTAGCATGATGCCAACAAGACTATTCTTGAAAGAGCAAAGGTTCTGTAAATTTAATTAGGGC
TAGATTTGAGCTGCTTGTAAGTCACAGGTTTTCCAGATGTCTGCCAACAAGAAATGACTCATACTGTGATGATAC
CTTTTGCTTTGCCCTGTGGACAATGTGGGTTTTTGAAATTTGCACCCCTTCAAACAATGATTTATCAGAGAAAGGG
GTCTGTTTTCAAAAAAGATTCTGTAATGAATTTTATGTGTGGCATATACTTATTTCTTGAGAGAAGATTTTAACT
TATTGTTTTTATTTATGGTTACATATGATGATAACCTGCTATTATTAACTTTTTCTAAAAAGTGAAAAAAAT
AAAAAGATATAAGAACTCAAGGTCCCATACTCTGTATTCCGGATCCATCTGAGATGCATGCTAAGCTATGTGTA
TGTTTTTAATTTTGCACCTGCTCTTCTGGCAATTTGTTTTAATGGTTATTGCAGAATATTAAGGTACATGTCTC
TCTGTTTTAAGTAATATTGCACCTTTATAAAAAAGTATGAATAAAGCAAACCTATTTTATAAAGTGCACTGTTTAA
GCATTTGCACCTGTATTTTTGCCATTTATTTTCACTTTTAAATTTGTCCTCACATGCCTCTTCTACTTTG
TATGCAACAAGTAGAATGGGGCCTTGTTGTGTGATGTAGTCAGCCACTTATGCACCAATGTGAGGAAAACCTAAA
GGGAAATTAACATAACACTGTGCTTCATATTTGTACACTGTGTTGTACTACAGTGAGGAATTTCTCTCTGTAGT

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FIGURE 392B

CATATATTATGTACATAATATTTTAGAATCATACCTATGACTTGTTTGGAAATTTTCTGTTGAATTTTAAATCC
AGAAAGCATATTTTATAAACTTATGCAGAGCACTTTTATTGCTCAAAAGTTCTGAATTCATACAGAAAACAAGTA
CTATGTGATGAAAACATTTTATTGAAAGATTGCGGCATTTAAAAATACAATTAATTCGTTCCCTATGCAAAAAAA
AAAAAA

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FIGURE 393

MEEEGSSGGAAGTSADGGDGGEQLLTVKHELRTANLTGHAKEVGIENFELLKVLGTGAYGKVFLVRKISGHDTG
KLYAMKVLKKATIVQAKTTEHTRTERQVLEHIRQSPFLVTLHYAFQTETKLHLILDYINGGELFTHLSQRERFT
EHEVQIYVGEIVLALEHLHKLGIYRDIKLENILLDSNGHVVLTDGFLSKEFVADETERAYSFCGTIEYMAPDIV
RGGDSGHDKAVDWWSLGVLMYELLTGASPFTVDGEKNSQAEISRRILKSEPPYPQEMSALAKDLIQRLLMKDPKK
RLGCGPRDADEIKEHLFFQKINWDDLAACKVPAPFKPVIRDELVDVSNFAEEFTMDPTYSPAALPQSSEKLFQGY
SfVAPSILFKRNAVIDPLQFHMVERPGVTNVARSAAMKDSPFYQHYDLDLKDKPLGEGSFSICRKCVHKKSNO
ALQVKIISKREANTQKEITALKLCEGHPNIVKLHEVFHDQLHTFLVMELLNGGELFDALRKKKHFSETEASYIM
RKLVSALSHMHDLGVVHRDLKPENLLFTDENDNLEIKI IDFGFARLKPPDNQPLKTPCFTLHSCRPELLNQNGYD
ESCDLWSLGVILYTMLSGQVPFQSHDRSLTCTSAVEIMKKIKKGDFFEGEAWKNVSQEAKDLIQGLLTVDPNKR
LKMSGLRYNEWLQDGSQSSNPLMTPDILGSSGAHVHTCVKATFHAFNKYKREGFCLQNVDKAPLAKRRKMKKTS
TSTETRRGSSESSSSSSSHGKTTPTKTLQPSNPADSNNPETLFQFSDSELRHGRSDQ

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FIGURE 394

TATATTGGCAGTTATTGAGGGTAAAGCAATATATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATA
TTTTATTAAAAAATGAATTATAACCCATTTTCAGTTTTGCCTGCATCATAAGAGTGAGCACTCCATTGCTTTCTT
TCCTGGCCACACTGCTACAATCCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCCACT
GCCAGTGAAAAAGCTACGTCTTTACTGCATAAATTAGAGGAAGCAATTCGGAACAACGGAACCTTCAAACATATA
AATACTGAATTATCGAACACTTGCCAGGCACCTTCAGCAGAAGACAAGGAACTGAAGAAGCTTTTTAGATGAGGA
ATTCCTCACTATGATTCCCTGTCTGCGCAGATGCAATTCACAACCTCTTCAAGAAAAATTGAAGCAGTGTTG
CCACAACTATATGGTGGTCAAGAAGCAAGAATACATCAGACACCCCTGACCTTGAAACATACGTGCTGGTACAC
ACCTCTGCTGGATGCCTTATCTCTGGATAGTTTTACAGCAGTTCCAACCCCTGGAATCAACACCTTTCTCAGGTGT
AGCCAACCAAATCCACACTCTGTGTGAAAGGCCACATATGGAGAAGTAAAGGATGGTGCTTTGGATGTAAAAAG
ACAACACAAGTGCCAGGCCCCACAAGTGGCCCCAGCCAGGAACGAATCTCTCAGGCTGCATCAGGATGAATGA
TGACCCAAGTATGGAAGAGAATGGTGTGTAACGCGTGTGTCTGAGAGCCTGCTGCAGTCCAGGGGATATTCTC
ACTACCATTACCCAGACACACTTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAA
TATGGCTTCTTGTGACCTTGACAGAACTCGCTCTGTAAGAAAGAGGAGGATACAAGATCAGCTTCTCCACGAT
AGAGGCCCAAGGCACAAGTCCAGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATT
AAATCTGGAAGCCAAAGAGGAACCAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGT
TTCCCTCTTCTGTAAACCACTGTGAAATCGGTAAACGTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGA
GGTGGAGGCAGAATTTCTCAGATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAGCT
TGAAGAGAGGTCCCGTGAAGTGGGCAGAAGAAAATTTGAAGAAAGAAATCACTAACTCTTTAAACTATTAGAGTC
TTTAACACCTCTGTGTGAAGATGACAACAGGCACAGGAAATCATTAAGAAGCTGGAGAAGAGTATAAAGTTTCT
TAGCCAGTGTGCAGCACGAGTGGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTTAGTAA
AGCAGTTGAAGTGATGATTACGACGTAGAAAACCTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGA
ACTGAAACAGGTTCTTCTGCAGAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTA
ACGTTACAGCTTCTCTAAACTCCAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGG
AAATGCAGGAATGGTGGCTGGGATGGAATAATGATCGATTCAAGTAGAAGGTCAAGCAGTTGGCGTATTTTGGG
GTCAAAGCAGAGTGAACACCGTCCCTCATTACCTCGATTTATTAGCACCTATTCTGGGCAGATGCTGAAGAAGA
AAAATGTGAACTAAAACTAAAGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAG
TCTTTCTGAAAAGAAAAATAATCCATCAAAGTGGGATGTCTCTTCAGTTTATGACACAATAGCTTCTGGGCAAC
AAATCTCAAGTCTCCATCAGAAAGGCTAATAAGGCCCTCTGGCTCTCTATTGCATTCAATTGTACTGTTTGCAGC
TTTGATGAGCTTCTCACAGGCCAATTATTCCAGAAGTCTGTGGATGCCGCTCCACACAGCAAGAGGACTCATG
GACGTCTCTAGAACATATCTTGTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTGTGACAGCAGGA
CATCCTAATATATGGATCTTGATTTTTAAGTTTCAGTATCTGAACCTTCGTAAATTAGTAACCTTTAGCTGGGAAA
GTATAGCATGAAACCAGAGGTTCTCAGAATGACCGTAAGATAGCTTACATTTCTCTTTTTGCCTTTATCTCCCC
AACTAAAATACAATGGG

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FIGURE 395

LESTPFSGVANQIHTLCERPTYGEVKDGDALDVKRQHKCPGPTSGPSPGTNLSGCIRMNDPDSMEENGVERVCPES
LLQSRGYSSLPLPRHTSSTDGTITSSDPGLEILNMASCDLDRNSLCKKEEDTRSASPTIEAQGTSPAHDNIAFQD
STSKDKTILNLEAKEEPETIEEHKKEHASGDSVVSPLPVTTVKSVNVRQSENTSANEKEVEAEFLRLSLGFKCDW
FTLEKRVKLEERSRDWAEENLKKEITNSLKLESITPLCEDDNQAQEI IKKLEKSIKFLSQCAARVASRAEMLGA
INQESRVSKAVEVMIQHVENLKRMYPKEHAELEELKQVLLQNERSFNPLEDDDDCQIKKRSASLNSKPSSLRRVT
IASLPRNIGNAGMVAGMENNDRF SRRSSSWRILGSKQSEHRPSLPRFISTYSWADAEKCEKTKDDSEPSGEE
TVERTRKPSLSEKKNNPSKWDVSSVYDTIASWATNLKSSIRKANKALWLSIAFIVLFAALMSFLTGLFQKSVDA
APTQQEDSWTSLEHILWPFTRLRHNGPPP

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FIGURE 396A

CGAAAGGCCGGCCTTGGCTGCGACAGCCTGGGTAAGAGGTGTAGGTGCGCTTGGTTTTCTGCTACCCGGAGCTGG
GCAAGCGGGTGGGAGAACAGCGAAGACAGCGTGAGCCTGGGCCGTTGCCCTCGAGGCTCTCGCCCGGCTTCTCTTG
CCGACCCGCCACGTTTGTGGATTAACTTTCAGGTTGCCGGCGCCCGCCCGCCGCTGGCCTCGCGGTGTGAG
AGGGAAGCACCCGTGCCTGTGGCTGGTGGCTGGCGCCTGGAGGGTCCGCACACCCGCCCGCCGCGCGCTTTGC
CCGCGGCAGCCGCGTCCCTGAACCGCGGAGTCGTGTTTGTGTTTGACCCGCGGGCGCCGGTGGCGCGCGGCCGAG
GCCGGTGTGCGCGGGGGCGGGCGGTGCGCGCGGAGGCAGAGGAAGAGGGAGCGGGAGCTCTGCGAGGCCGGGCGC
CGCCATGGAACTGGGCCCGAGCCCCGACCGCGCCGCTGCTCTTCGCTGCAGCCCCCTCCCGCTGCGAGCC
CGTCGTGAAGGCGCTATTTGGCGCTTCAGCCGCCGGGGACTGTCGCTGTACCAACCTGACCGTCACTATGGA
CCAGCTGCAGGGTCTGGGCAGTGATTATGAGCAACCACTGGAGGTGAAGAACAACAGTAATCTGCAGAGAATGGG
CTCCTCCGAGTCAACAGATTTCAGGTTTCTGTCTAGATTCTCCTGGGCCATTGGACAGTAAAGAAAACCTTGAAAA
TCCTATGAGAAGAATACATTCCCTACCTCAAAAGCTGTTGGGATGTAGTCCAGCTCTGAAGAGGAGCCATTCTGA
TTCTCTTGACCATGACATCTTTAGCTCATCGACCCAGATGAGAACAAGGAAAATGAAGCCTTTGAGTTTAAGAA
GCCAGTAAGACCTGTATCTCGTGGCTGCCTGCACTCTCATGGACTCCAGGAGGGTAAAGATCTCTTCACACAGAG
GCAGAACTCTGCCAGCTCGGAATGCTTTCTCAAAAGAGATAGCAGTGAACCAGGGAATTTTCATTCTCT
TTTTACACCCAGTCACCTGTGACAGCCACTTTGTCTGATGAGGATGATGGCTTCGTGGACCTTCTCGATGGAGA
GAATCTGAAGAATGAGGAGGAGACCCCTCGTGCATGGCAAGCCTCTGGACAGCTCCTCTCGTCATGAGAACTAC
AAACCTTGACAACCGATGCAAGCTGTTTGACTCCCCCTTCCCTGTGTAGCTCCAGCACTCGGTCACTGTTGAAGAG
ACCAGAACGATCTCAAGAGGAGTCTCCACCTGGAAAGTACAAAGAGGAGGAAGAGCATGTCTGGGGCCAGCCCCAA
AGAGTCAACTAATCCAGAGAAGGCCCATGAGACTCTTCATCAGTCTTTATCCCTGGCATCTTCCCCCAAAGGAAC
CATTGAGAACATTTTGACAATGACCCAAGGGACCTTATAGGAGACTTCTCCAAGGGTTATCTCTTTCATACAGT
TGCTGGGAAACATCAGGATTTAAATATCATCTCTCCAGAAATTATGGCATCTGTTTTGAATGGCAAGTTTGCCAA
CCTCATTAAGAGTTTGTATCATCGACTGTGATACCCATATGAATACGAGGGAGGCCACATCAAGGGTGCAGT
GAACTTGACATGGAAGAAGAGGTTGAAGACTTCTTATTGAAGAAGCCATTGTACCTACTGATGGCAAGCGTGT
CATTGTTGTGTTTCACTGCGAGTTTCTTCTGAGAGAGGTCCCCGCATGTGCCGGTATGTGAGAGAGAGAGATCG
CCTGGGTAATGAATACCCCAAACCTCCACTACCCCTGAGCTGTATGTCTGAAGGGGGGATACAAGGAGTTCTTTAT
GAAATGCCAGTCTTACTGTGAGCCCCCTAGCTACCGGCCCATGCACCACGAGGACTTTAAAGAAGACCTGAAGAA
GTTCCGCACCAAGAGCCGGACCTGGGCAGGGGAGAAGAGCAAGAGGGAGATGTACAGTCTGTGAAGAAGCTCTG
AGGGCGGCAGGACCAGCCAGCAGCCCCAAGCTTCCCTCCATCCCCCTTTACCCTCTTTGCTGCAGAGAACTT
AAGCAAAGGGGACAGCTGTGTGACATTTGGAGAGGGGGCCTGGGACTTCCATGCCTTAAACCTACCTCCCACACT
CCCAAGGTTGGAGCCCAGGGCATCTTGCTGGCTACGCCTCTTCTGTCCCTGTTAGACGTCTCCGTCCATATCAG
AACTGTGCCACAATGCAGTTCTGAGCACCCTGTCAAGCTGCTCTGAGCCACAGTGGGATGAACCAGCCGGGGCCT
TATCGGGCTCCAGCCATCTCATGAGGGGAGAGGAGACGGAGGGGGAGTAGAGAAGTTACACAGAAATGCTGCTGGC
CAAATAGCAAAGACAACCTGGGAAGGAAAGGTCTTTGTGGGATAATCCATATGTTTAAATTTATTCAACTTCATCA
ATCACTTTATTTTATTTTTTTTCTAACTCCTGGAGACTTATTTTACTGCTTCATTAGGTTGAAATACTGCCATT
CTAGGTAGGGTTTTATTATCCCAGGACTACCTCGGCNNNNNNNNNNNNNNNNNNNNNGAAGTGGGTAAGAAAAT
GCAAACCTGTTATAAGTTATCGGACAGAAAGCTAGGTGCTCTGTCAACCCAGGAGGCGCTGTGGTACTGGGGCT
GCTGCTATTTAAGCCAAGAACTGAGGTCTGGTGAGAGCGTTGGACCCAGGCTTGGCTGCCTGACATAAGCTAAA
TCTCCCAGACCCACCCTGGCTACCGATATCTATTTGGTGGGAGGTGTGGCCCTGTTCTTCTCACCCAGTTCC
ATGACATTGGCTGGTATAGGAGCCACAGTCAGGAAAGCACTTGAGGCAGCATCTGTTGGGCCACCCCGGCTCAG
TGCTGGAATGTTGCAGTGTAGGTTTCCCAGGCAAGGGGGGTGGGGGTAGGTGGGCTCCACAGGATGGGGGAGGAG
CATGTCCACTGAGTATCTTCCTTATGTTGCTGTGATATTGATAGCTTTTATTTTCTAATTTTTAAAAAATGGTCA
TATTATGAGTCAAAGAGTATCAAATCAGTGTGGATGGACCACCAAGGGTGAGGAGAGGGGCTGGAAGCCCTGG
GCATTAGGAGAAGGGAGTGGGTGCTGGCATGGACATGACTGGATAGAATTTTCTCAGGAGGGAGCTTGGTGGATT
TTGAAGGTAAAACCTTCTGGGTTTATCATGTTTAAATTTTAGAGACAGGGAGTGATGAATCATACCGGTTGTCC
CCTTATCTAACTCCATAAAAGTGGGAATTTCAAAAGAACACCTCATCCAAGGAGCTGGGGCAGACTTCATTGATT
CTAGAGAGACCTGTTTCAGTGCCTACTCATCCCTGCCCTCTGGTGCCAGCCTCCTTACCATCACGGCTTCACTGA
GGTGTAGGTGGGTTTTTCTTAAACAGGAGACAGTCTCTCCCTCTTACCTCAACTTCTTGGGGTGGGAATCAGTG
ATACTGGAGATGGCTAGTTGCTGTGTACGGGTTTGAAGTTACATTTGGCTATAAAACAATCTTGTGGGAAAAAT

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FIGURE 396B

GTGGGGGAGAGGACTTCTTCCTACACGCGCATTGAGACAGATTCCAAC TGGTTAATGATATTGTTTGTAAGAAAG
AGATTCTGTTGGTTGACTGCCTAAAGAGAAAGGTGGGATGGCCTTCAGATTATAACCAGCTTAGCTAGCATTACTA
ACCAACTGTTGGAAGCTCTGAAAATAAAAGATCTTGAACCCAT

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FIGURE 397

MELGPSPAPRLLLFACSPPPASQPVVKALFGASAAGGLSPVTNLTVTMDQLQGLGSDYEQPLEVKNNNSNLQRMGS
SESTDGFCLDSPGPPLDSKENLENPMRRIHSLPQKLLGCSPALKRSHSDSLDHDIFQLIDPDENKENEAFEFKKP
VRPVSRGCLHSHGLQEGKDLFTQRQNSAQLGMLSSNERDSSEPGNFIPLFTPQSPVTATLSDEDDGFVDLLDGEN
LKNEEETPSCMASLWTAPLVMRTTNLDNRCKLFDSPSLCSSSTRSVLKRPERSQEESPPGSTKRRKSMGASPK
STNPEKAHETLHQSLSLASSPKGTIENILDNDPRDLIGDFSKGYLFHTVAGKHQDLKYISPEIMASVLNGKFANL
IKEFVIIDCRYPYEYEGGHIKGAVNLHMEEVEDEFLKKPIVPTDGKRVIIVVFHCEFSSERGPRMCRYVRERDRL
GNEYPKLHYPELYVLKGGYKEFFMKCQSYCEPPSYRPMHEDFKEDLKKFRTKSRTWAGEKSKREMYSLKKL

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FIGURE 398A

CGGGCAGCGTGGACCCCGGATGAGTTGCTTTTAGGCTTGCTGGCCCCGCGGGGCTGTCCAGGCACGCGAGGCCCT
CAGGTACGCCCTCTCTTCCCTGCAGGATCCGGCCCTCAAAGACGAGGGTCACGCACGCGTTACAACCCCGAAACA
GTAGCACAAGATTTAATTTTTAAAGAGCGTGTTCCTCGGGGCTTGCCGTTTCGTTCCAGCCTCAGGAAT
TTATGGTCGCCCTTTTTGAATGAGCAACAAAATGCTTCAACAAGTTCCAGAAAACATAAATTTTCTGCTGAAGAA
GAGAAAATCTTGGAGTTTTGGACTGAATTTAATTGTTTTCAGGAATGCTTAAAGCAATCAAAACATAAACCAAAA
TTTACCTTCTATGATGGTCCTCCTTTTGCAACTGGACTGCCTCACTATGGACATATACTTGCGGGTACAATTA
GATATAGTTACAAGATATGCTCACCAGAGTGGGTTTCATGTTGACAGAAGATTGGATGGGATTGCCATGGCTTA
CCTGTGGAATATGAAATTGATAAGACACTGGGAATCAGAGGACCAGAGGATGTGGCCAAAATGGGGATTACAGAG
TATAACAATCAGTGCCGAGCAATTGTGATGAGATATTCTGCTGAGTGAAGTCTACTGTTAGCAGACTTGGCCGA
TGGATTGACTTTGACAATGACTATAAACTCTGTATCCACAATTCATGGAATCAGTCTGGTGGGTCTTCAAACAA
CTCTATGATAAAGGCCTTGTTTATAGAGGTGTGAAAGTCATGCCCTTCTCTACGGCATGTAACACTCCACTTTCC
AACTTCGAGTCACACCAGAATTATAAGGATGTTCAAGATCCTTCAGTATTTGTAACTTCCCTTTGGAAGAAGAT
GAAACTGTATCTTTAGTTGCTTGGACAACCCTCCCTGGACTCTACCTAGTAACCTTGCTGTGTGTGTTAATCCA
GAAATGCAATATGTGAAAATTAAAGATGTTGCCAGAGGACGATTACTCATTTTAAATGGAAGCCAGATTGTCAGCC
CTCTATAAATTGGAGAGTGACTATGAGATCCTTGAAAGATTTCTGGTGCCTATCTTAAAGGCAAGAAGTACAGG
CCCCTGTTTGACTATTTCTGAAGTGTAAAGAGAATGGCGCTTTCACTGTGCTTGTGACAACATATGTGAAGGAA
GAAGAAGGCACAGGGGTGTCCACCAAGCTCCTTACTTCGGTGTGAGGACTATCGGGTCTGTATGGACTTTAAC
ATTATTCGAAAGACTCACTCCCTGTTTGCCCTGTGGATGCTTCAGGCTGCTTCACAACGGAGGTGACAGATTTTC
GCAGGACAGTATGTGAAGGATGCTGACAAAAGTATCATCAGGACTTTGAAGGAACAAGGCCGACTTCTGGTTGCC
ACCACCTTCACTCACAGCTACCCTTTTTGCTGGAGATCAGACACTCCTCTAATTTACAAAGCAGTGCCAGCTGG
TTTGTGCGAGTGGAGAACATGGTGGACCAGCTCCTAAGGAACAATGACCTGTGCTACTGGGTCCCAGAGTTGGTA
CGAGAAAAACGATTTGGAATTGGCTGAAAGATGCACGTGACTGGACAATTTCCAGAAACAGATACTGGGGCACC
CCCATCCCCTGTGGGTGAGGATGACTTTGAGGAGGTGGTATGCATTGGGTGAGTGGCGGAACCTGAAGAAGTGT
TCAGGAGCAAAGATCTCAGATCTCCACAGAGAGAGTGTGACCACCTGACCATTCCTTCACGCTGTGGGAAGGGA
TCCTTGACCCGCATCTCTGAAGTGTGTTGACTGTTGGTTTGAGAGTGGCAGCATGCCCTATGCTCAGGTTTATTAC
CCGTTTGAAAACAAGAGGGAGTTTGAGGATGCTTTTCTGCAGATTTCAATGCGGAGGGCATCGACCAAACCAGA
GGATGGTTTTATACCCTGCTGGTGTGGCCACGGCCCTCTTTGGACAACCGCCTTTCAAGAAGCTAATTGTGAAT
GGGCTTGCTGCTGGCAAGTGATGGCCAAAAAATGAGCAAACGGAAAAAGAAATTATCCAGATCCAGTTTCCATCATC
CAGAAGTATGGTGTGATGCCCTCAGATTATATCTGATTAACTCCCTGTGGTGAGAGCAGAAAACCTCCGCTTT
AAAGAAGAGGGTGTGCGGGACGTCTTAAGGATGTACTGCTCCCATGGTACAATGCCTATCGCTTCTTAATCCAG
AACGTTCTGAGGCTCCAGAAGGAGGAAGAAATAGAATTTCTCTACAATGAGAACACGGTTAGAGAAAGCCCCAAC
ATTACAGACCGGTGGATCCTGTCTTCATGCAGTCTCTCATTGGCTTCTTTGAGACTGAAATGGCAGCTTATAGG
CTTTATACTGTGGTGCCCTCGCTGGTCAAGTTTGTAGATATTCTGACCAATTGGTATGTTAGAATGAACCGCAGA
AGATTAAAGGGTGAAAATGGGATGGAGGATTGTGTGATGGCCCTAGAAACCTTGTTTAGTGTCTGCTTTCTCTT
TGCAGACTTATAGCTCCCTACACACCTTTTCTCACTGAATTGATGTACCAGAATCTAAAGGTGCTGATTGACCT
GTTTCTGTTTCAAGGACAAGGACACACTCAGCATTCACTACCTCATGCTGCCCCGTGTTGAGAAGAATTGATTGAC
AAGAAAACAGAGAGTGCAGTATCTCAGATGCAGTCTGTGATTGAACTTGAAGAGTGATCAGAGACCGAAAAACT
ATTCCCATAAAGTATCCTTTGAAAGAAATTGTGGTTATCCATCAAGATCCAGAAGCTCTTAAAGATATCAAGTCT
TTGGAGAAGTATATCATTGAGGAACCTCAATGTTTCAAAAAGTTACTGTCTACAGATAAAAAACAAGTATGGCATT
CGGCTAAGGGCAGAACCAGATCACATGGTCTGGGGAAAGCGTCTGAAGGGAGCCTTTAAGGCAGTGATGACGTCC
ATCAAGCAGTTGAGCAGTGAGGAGCTGGAGCAGTTCCAGAAGACTGGGACCATTGTTGTGGAAGGCCATGAATTG
CACGATGAAGACATCCGCCTCATGTACACCTTTGATCAGGCCACAGGTGGGACTGCGCAATTTGAAGCACACTCA
GATGCTCAGGCTTTGGTCTCTTAGATGTCACTCCTGACCAGTCAATGGTAGATGAAGGAATGGCTCGGGAAGTC
ATCAATCGCATACAGAACTTCGCAAAAAGTGCAATCTGGTTCCAAGTATGAAATCACAGTGTACTATAAAGCA
AAGTCTGAAGGAACATATCTGAATAGTGTATTGAAAGCCACACAGAGTTCATATTTACCACCATAAAGGCTCCC
TTGAAACCATATCCAGTTTCTCCATCGGATAAAGTCCTTATTCAAGAAAAACACAGTTGAAGGGATCTGAACTG
GAAATTACACTCACCAGAGGATCTTCCCTTCTGGTCTGCTTGTGCATATGTCAATCTTAACATTTGTGCAAAAT
GGCAGTGAACAAGGTGGAGTATTGCTCCTGGAATAAAGGTGACAATAGGTTGGACCTTTTAAAGCTGAAG

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FIGURE 398B

AGTGTTGTCAGTACTGATTTTTGGTGTGAAAAATACAGAGCTGGCTGTCTTCCATGATGAAACAGAAATACAAAAC
CAAACGACTTACTGAGTCTTAGTGAAAAACACTTTGTGTGACTGCAGGATCGGCTCCCTCTCTGATCAACAGT
TCTAGTACTCTTCTTTGTGAGTATATCAACCTACAGCTCCTGAATGCAAAGCCACAAGAGTGTTTAATGGGGACA
GTGGGCACCTCTCCTGCTTGAAAAACCACTTGGGCAGAAATGGACTCACCCACCAAGGTCTTCTGTATGAAGCAGCC
AAGGTGTTTGGCCTTCGGAGCAGGAAGCTAAAGCTGTTTCTGAATGAGACCCAAACGCAGGAAATTACAGAAGAC
ATCCCCGTGAAGACTTTGAATATGAAGACTGTGTATGTTTCTGTGTTACCAACAACAGCAGACTTCTAGCATGTA
CTTATCAATGTTGTTTCGGTCAGCCCTTCCCTAATTACACCTATCCCCTACACATACATGCACATAGACACACACA
TGAACACACTGAAGATATTTCTTCAGGTGTGTGTAAAATATGCTGCTTGGATTGAAATTCAAATGGGATTGATT
AGTCAAGTAACTTGAGACCTCACAGTAATCTTCACACTTAACCTTAGACACCTATGCAGTCATGTTGGGAGCAGG
TTACAATGTTACTTCAGCCACAGTTTATTTCTATTCTTGAGTTCTTAAGTACAGAAGATAGAAGTGATTTAAAT
GGCATAGTATATATATCATTTTCTGGCCTTTTAAATTTATTTGAGACCTCTTGATGAAATGGACATATTATATA
TTTCTGCCACCTGGATTTTCTGGATAATTTGATGGAATATTTTAAGTTTCAGTAAATCAGAACAATAAACAAC
TCAGATAT

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FIGURE 399

MLQQVPENINFPAEEEEKILEFWTEFNCFQECLKQSKHKPKFTFYDGPPFATGLPHYGHILAGTIKD IVTRYAHQS
GFHVDRRFGWDCHGLPVEYEIDKTLGIRGPEDVAKMGITEYNNQCRAIVMRYSAEWKSTVSRLGRWIDFDNDYKT
LYPQFMESVWWVFKQLYDKGLVYRGVKVMPFSTACNTPLSNFESHQNYKDVQDPSVFTFPLEEDET VSLVAWTT
TPWTLPSNLAVCVNPEMQYVKIKDVARGRLILMEARLSALYKLES DYEILERFPGAYLKGGKYRPLFDYFLKCK
ENGAFTVLVDNYVKEEEGTGVVHQAPYFGAEDYRVCMDFNIIRKDSL P VCPVDASGCFTTEVTDFAGQYVKDADK
SIIRTLKEQGRLLVATTFTHSYFPCWRS D TPLIYKAVPSWFVRVENMVDQLLRNNDLCYWVPELVREKRFGNWLK
DARDWTISRNRWGTPIPLWVSDDFEEVVCIGSVAEELEELSGAKISDLHRESVDHLTIPSRCGKGS LHR ISEVFD
CWFESGSMPIYAQVHYPPFENKREFEDAFPADFIAEGIDQTRGWFTLLVLATALFGQPPFKNVIVNGLVLASDGQK
MSKRKKNYPDPVSIIQKYGADALRLYLINSPVVRAENLRFKEEGVRDVLKDVLLPWYNAYRFLIQNVLR LQKEEE
IEFLYNENTVRESPNITDRWILSFMQSLIGFFETEMAAYRLYT VVPRLVKFVDILT NWYVRMNRRLKGENGMED
CVMALETLSVLLSLCRLIAPYTPFLTEL MYQNLKVLIDPVSVDKDTLSIHYLM LPRVREELIDKKTESAVSQM
QSVIELGRVIRDRKTIPIKYPLKEIVVIHQDPEALKDIKSLEKYII EELNVRKVT LSTDKNKYGIRLRAEPDMV
LGKRLKGAFKAVMTSIKQLSSEELEQFQKTGTIVVEGHELHDEDIRL MYTFDQATGGTAQFEAHSDAQALVLLDV
TPDQSMVDEGMAREVINRIQKL RKKCNLVP TDEITVYYKAKSEGTYLNSVIESHTEFI FTTIKAPLKPYPVSPSD
KVLIQEKTQLKGSELEITLTRGSSLP GPACAYVNLNICANGSEQGGVLLLENPKGDNRLDLLKLKSVVTSIFGVK
NTELAVFHDETEIQNQTDLLSLSGKTL CVTAGSAPSLINSSSTLLCQYINLQLLNAKPQECLMGTVGTLLLENPL
GQNGLTHQGLLYEAAKVFGLR SRKLKLF LNETQTQEITEDIPVKTLNMKTVYVSVLP TTADF

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FIGURE 400

GAAAAGCGCGCGCGGGGATTCCAGGAGTCGTGGTTTTCTTGCCCTTGATGTACTGGAGCAATCAGATCACACGGCGG
CTTGAGAGTGAGTGCAAGGTTTTATGAGTGGAATTAGCCCTCAGCAGATGGGGGAGCCAGAAGGCAGTTGGAGT
GGGAAGAACCCAGGGACCATGGGCGCCTCCAGGCTCTATACCCTGGTGCTGGTCCTGCAGCCTCAGCGAGTTCTC
CTGGGCATGAAAAAGCGAGGCTTCGGGGCCGGCCGGTGGAATGGCTTTGGGGGCAAAGTGCAAGAAGGAGAGACC
ATCGAGGATGGGGCTAGGAGGGAGCTGCAGGAGGAGAGCGGTCTGACAGTGGACGCCCTGCACAAGGTGGGCCAG
ATCGTGTTTGAGTTCGTGGGCGAGCCTGAGCTCATGGACGTGCATGTCTTCTGCACAGACAGCATCCAGGGGACC
CCCGTGGAGAGCGACGAAATGCGCCCATGCTGGTTCCAGCTGGATCAGATCCCCTTCAAGGACATGTGGCCCGAC
GACAGCTACTGGTTTCCACTCCTGCTTCAGAAGAAGAAATTCCACGGGTACTTCAAGTTCAGGGTCAGGACACC
ATCCTGGACTACACACTCCGCGAGGTGGACACGGTCTAGCGGGAGCCCAGGGCAGCCCCTGGGCAGGAGACGTGG
CTGCTGAACAGCTGCAAACCATCTTACCTGGGGGCATTGAGTGGCGCAGAGCCGGGTTTCATCTGGAATTAAC
GGATGGAAGGGAAAATAAAGCTATCTAGCGGTGAAAAA

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FIGURE 401

MSGISPQQMGEPEGSWSGKNPGTMGASRLYTLVLVLQQRVLLGMKKRGFGAGRWNFGGKVVQEGETIEDGARRE
LQEESGLTVDALHKVGQIVFEFVGEPELMDVHVFC TDSIQGTPVESDEMPCWFQLDQIPFKDMWPDDSYWFPLL
LQKKKFHGYFKFQGQDTILDYTLREVDTV

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FIGURE 402

GGCACGAGGCAGGCCACCCGCCGCTAAGCTGAGAAGGGAGAGCGAGCTTAGGACCGCCTGCCCGGGCAACCCCG
AACCAAGCTTTAGCCGCCGAGGCCGCGTGTCCCAAAGGCCAGTCATCCCTCCTCTGTGTGGCCATGGGAATTCAA
GGCCTGGCCAAACTAATTGCTGATGTGGCCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTACTTTGGCCGT
AAGGTGGCCATTGATGCCTCTATGAGCATTATCAGTTCCTGATTGCTGTTCCGCCAGGGTGGGGATGTGCTGCAG
AATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCTACCGCACCATTTCGCATGATGGAGAACGGCATC
AAGCCCGTGTATGTCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGCAGTGAGCGGCGG
GCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAGCAGGAGGTGGAAAAATTTACTAAGCGG
CTGGTGAAGGTCATAAGCAGCACAAATGATGAGTGCAAACATCTGCTGAGCCTCATGGGCATCCCTTATCTTGAT
GCACCCAGTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCTACCGAGGAC
ATGGACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCCAGTGAAGCCAAAAAGCTGCCAATC
CAGGAATTCACCTGAGCCGGATTCTGCAGGAGCTGGGCCCTGAACCAGGAACAGTTTGTGGATCTGTGCATCCTG
CTAGGCAGTGACTACTGTGAGAGTATCCGGGGTATTGGGCCCAAGCGGGCTGTGGACCTCATCCAGAAGCACAA
AGCATCGAGGAGATCGTGCGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCACAAGGAGGCT
CACCAGCTCTTCTTGGAACCTGAGGTGCTGGACCCAGAGTCTGTGGAGCTGAAGTGGAGCGAGCCAAATGAAGAA
GAGCTGATCAAGTTCATGTGTGGTGAAGCAGTTCTCTGAGGAGCGAATCCGCAGTGGGGTCAAGAGGCTGAGT
AAGAGCCGCCAAGGCAGCACCCAGGGCCGCTGGATGATTTCTTCAAGGTGACCGGCTCACTCTCTTCAGCTAAG
CGCAAGGAGCCAGAACCCAAAGGGATCCACTAAGAAGAAGGCCAAAGACTGGGGCAGCAGGGAAGTTTAAAGGGGA
AAATAAATGTGTTTCCCCATTATACCTCCTTCACCCAGAATATTTGCCGTCTTGTACCCTTAAGAGCTACAGCT
AGAGAAACCTTCACGGGGTGGAGAGAGGATTCTAAGGCTTTTCTAGCGTGACCCTTTTCAGTAGTGCTAGTCCCT
TTTTTACTTGATCTTAATGGCAAGAAGGCCACAGAGGTACTTTTCCTTTTTTAGCTCAGGAAAATATGTCAGGCT
CAAACCACTTCTCAGGCAGTTTAATGGACACTAAGTCCATTGTTACATGAAAGTGATAGATAGCAACAAGTTTTG
GAGAAGAGAGAGGGGAGATAAAAGGGGGAGACAAAAGATGTACAGAAATGATTTCCCTGGCTGGCCAACTGGTGGCC
AGTGGGAGGTGATGGTGGACCTAGACTGTGCTTTTCTGTCTTGTTCAGCCTTGACCCACCTTGAGAGAGAGCCAC
CAGGAAGGCGCATCTTAGCAGATGGGAGGAAGTCTGAGAGAAGATGGGCAGAAAGCTGGAGCCCCCTGGAGTTGG
CTGTGTCTGTGTTTGTGACTGATTACTGGCTGTGTCTTGGGTGGGCAGAACTCGAAGTTGCTATGTAATTTGTG
TCTAGTTATTCAGAGGAGTAAGATGGTGATGTTACCTGGCAATCAGCTGAGTTGAGACTTTGGAATAAGACACT
GGTTTTCATGCGCTGTTTTTGTGTTTAAAGTTATGAAGAAAAAGTCAATAAAATTCTAAAAGTAAAAAAAAAAAA
AAAAAA

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FIGURE 403

MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLIAVRQGGDVLQNEEGETTSHLMGMFYRTIRMM
ENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHNDCKHLLSLMGI
PYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLP IQEFHLSRILQELGLNQEQFVD
LCILLGSDYCESIRGIGPKRAVDLIQKHKSIEEIVRRLDPNKYPVPENWLHKEAHQLFLEPEVLDPESELKWSE
PNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLLDFFKVTGSLSSAKRKEPEPKGSTKKKAKTGAAGK
FKRGK

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FIGURE 404

AGTCCTGCGATTTTCGGGTGTAGAGGGAGCAGGGGCGCTGCGGGGACCTGGTGTGGGTGGAGTGGGGACAAGCGGTG
GAGAAGGGTACGCCAGGGTCGCTGAGAGACTCTGTTCTCCCTGGAGGGACTGGTTGCCATGAGAGCAGCCGTCTG
AGGGGACGCAGCCTGCACTACGCGCCCCAAGAGGGCTGTGCGTGGCGAGCAGGTACAGTGACGGGAGCGCGGGCTT
TGGAAGGCGGCTGAACGTCAGGCCACCCGCCGCTAAGCTGAGAAGGGAGAGCGAGCTTAGGACCGCCTGCCCCGGG
GCAACCCGAACCAAGCTTTAGCCGCCGAGGCCGCGTGTCCCAAAGGCCAGTCATCCCTCCTCTGTGTTGCC**ATG**

GGAATTCAAGGCCTGGCCAACTAATTGCTGATGTGGCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTAC
TTTGGCCGTAAGGTGGCCATTGATGCCTCTATGAGCATTATCAGTTCTGATTGCTGTTTCGCCAGGGTGGGGAT
GTGCTGCAGAATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCTACCGCACCATTTCGCATGATGGAG
AACGGCATCAAGCCCGTGTATGTCCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGCAGT
GAGCGGCGGGCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAGCAGGAGGTGGAAAAATTC
ACTAAGCGGCTGGTGAAGGTCACTAAGCAGCACAATGATGAGTGCAAACATCTGCTGAGCCTCATGGGCATCCCT
TATCTTGATGCACCCAGTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCT
ACCGAGGACATGGACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCCAGTGAAGCCAAAAAG
CTGCCAATCCAGGAATTCACCTGAGCCGGATTCTGCAGGAGCTGGGCCTGAACCAGGAACAGTTTGTGGATCTG
TGCATCCTGCTAGGCAGTGACTACTGTGAGAGTATCCGGGGTATTGGGCCCCAAGCGGGCTGTGGACCTCATCCAG
AAGCACAAGAGCATCGAGGAGATCGTGCGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCAC
AAGGAGGCTCACCAAGCTCTTCTTGGAACCTGAGGTGCTGGACCCAGAGTCTGTGGAGCTGAAGTGGAGCGAGCCA
AATGAAGAAGAGCTGATCAAGTTCATGTGTGGTGAAAAGCAGTTCTCTGAGGAGCGAATCCGCAGTGGGGTCAAG
AGGCTGAGTAAGAGCCGCCAAGGCAGCACCCAGGGCCGCTGGATGATTTCTTCAAGGTGACCGGCTCACTCTCT
TCAGCTAAGCGCAAGGAGCCAGAACC AAGGGATCCACTAAGAAGAAGGCAAAGACTGGGGCAGCAGGGAAGTTT
AAAAGGGGAAAA**TAA**ATGTGTTTCCCCATTATACCTCCTTCACCCCAAGATATTTGCCGTCTTGTACCCTTAAGA
GCTACAGCTAGAGAAACCTTCACGGGGTGGAGAGAGGATTCTAAGGCTTTTCTAGCGTGACCTTTTTCAGTAGTG
CTAGTCCCTTTTTTACTTGATCTTAATGGCAAGAAGGCCACAGAGGTACTTTTCTTTTTTAGCTCAGGAAAATA
TGTCAGGCTCAAACCACTTCTCAGGCAGTTTAATGGACACTAAGTCCATTGTTACATGAAAGTGATAGATAGCAA
CAAGTTTTGGAGAAGAGAGAGGGAGATAAAAGGGGGAGACAAAAGATGTACAGAAATGATTTCTGGCTGGCCAA
CTGGTGGCCAGTGGGAGGTGATGGTGGACCTAGACTGTGCTTTTCTGTCTTGTTCAGCCTTGACCCACCTTGAGA
GAGAGCCACCAGGAAGGCGCATCTTAGCAGATGGGAGGAAGTCTGAGAGAAGATGGGCAGAAAGCTGGAGCCCC
TGGAGTTGGCTGTGTCTGTGTTTGTGACTGATTACTGGCTGTGTCTTGGGTGGGCAGAACTCGAACTTGCTATG
TAATTTGTGTCTAGTTATTCAGAGGAGTAAGATGGTGATGTTACCTGGCAATCAGCTGAGTTGAGACTTTGGAA
TAAGACACTGGTTTTTCATGCGCTGTTTTTGTTTTAAAGTTATGAAGAAAAAGTCAATAAAATTCTAAAAGTAAA
AAAAAAAAAAAAAAAA

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FIGURE 405

MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLIAVRQGGDVLQNEEGETTSHLMGMFYRTIRMM
ENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHNDECKHLLSLMGI
PYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLP IQEFHLSRILQELGLNQEQFVD
LCILLGSDYCESIRGIGPKRAVDLIQKHKSIEEIVRRLDPNKYPVPENWLHKEAHQLFLEPEVLD PESVELKWSE
PNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLLDFFKVTGSLSSAKRKEPEPKGSTKKKAKTGAAGK
FKRGK

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FIGURE 406

GCACGCCCAGCGAGTTCCAGAGGCGCCAGTGGAAGCTGCGGCGGCGGTGTCTCGCGTTCGGCGGGATTCTCTTC
GCTCCGGCTCGGCCTAGGTCTACGTCCCCAGCTCCAGCCGCGGCTCGGACTCGGTCTCTGACCCCCAACTCGGT
CCCCTAGTCCGGCCCCGGCTCCGGGCCCCCAACCCTCGCTCCGGCCCCGGCCCCGGCCCCCAGCCCCCTGCACCCCTCGG
CCCCGGCCCCAGGCCCCGGCCGCGGCGCTCCCGCCTGGAGCCGCGCGCGCCCCCAGCCCCCTGCACCCCTCGG
CCCCTCGCCTTCTCTTCCCGGCGCGGCCCCCGGCTTCCGCGCGCCGCCCCGCCACCAATCCTCTTGCTACCATG

TCCGTGGAGCTCGAGGAGGCCCTGCCAGTGACGACCGCCGAGGGAATGGCCAAGAAGGTGACCAAGGCTGGCGGC
TCGGCGGCGTTGTCCCCATCTAAGAAGAGGAAGAATAGCAAGAAGAAGAACCCAGCCGGGCAAGTACAGCCAGCTG
GTGGTGGAGACCATCCGTAGGCTGGGCGAGCGCAACGGCTCGTCGCTGGCCAAGATCTACACCGAGGCCAAGAAG
GTTCCGTGGTTCGACCAGCAGAATGGGCGCACCTACCTCAAGTACTCGATCAAGGCGCTGGTGCAGAACGACACG
CTTCTGCAGGTGAAGGGCACCGGCGCCAACGGTTCTTCAAGCTCAACCGCAAGAAGCTGGAGGGCGGCGGGGAG
CGGCGCGGAGCCCCGGCGGCCGCCACCGCCCCGGCCCCCACC GCGCACAAAGCGAAGAAGGCAGCCCCGGGCGCG
GCCGGCTCCCGGCGCGCGGACAAGAAGCCCCGCCAGGGGCCAGAAGCCGGAGCAGCGCTCGCACAGAAGGGCGCT
GGCGCCAAGAAGGACAAAGGCGGCAAGGCCAAGAAGACGGCGGCCGCCGGGGGCAAGAAGGTGAAGAAGGCGGCC
AAGCCCAGCGTCCCCAAAGTGCCCAAGGGCCGCAAGTGAGCGTGTGCGGCCGTCAGAGCGGCCGGCGTGGGCTTT
TCGGTGTTTTTGTCTTTCTACCCCAAGTGACGTAGATTTTGTACGGCTCACGCCGGCCGGGGCCGCGAGGCCTGG
TCTGAGCCTCAGGGAGGGGGCCCCGGGTCTCTCAGTCTTTCCCCCTCCCCAACGATGTAGCGTTTTTCGTTGTTT
GCTTTAGGTTTTTTGAAACAGCCCCGGCGACGCCTCTATTGGCTCTCGGCCTTGGCAACGGCCGTCGTCATGGTTA
CTGGCCCCCTAGGCGCCGATGGCCGAGGCCGCGCCTGCCACCGGGCGGGGTCGCTGGTTGGCCGGGCCAGGCGC
GCGGGGACGCGGAGGCCGCGCATCCTTTCCAGCTCCCCACCTCCTTGCCCTTGGGTGCGCGACAAACAATCGC
TCCGGGCTCAGGGCTGCGCGGCTCTTCCCTTCATTCCATGGGCCTTTTTTTGGGCACAATAAAGCGTTTAAACCT
TTC

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FIGURE 407

MSVELEEALPVTTAEGMAKKVTKAGGSAALSPSKKRKNSKKKNQPGKYSQLVVETIRRLGERNGSSLAKIYTEAK
KVPWFDQQNGRITYLKYSIKALVQNDTLLQVKGTGANGSFKLNRRKLEGGGERRGAPAAATAPAPTAKKAKKAAPG
AAGSRRADKKPARGQKPEQRSHKKGAGAKKDKGGKAKKTAAAGGKKVKKAAKPSVPKVPKGRK

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FIGURE 408

ACGCGTCCGCTTCGGAATGAGAGACTCAACCATAATAGAAAGAATGGAGAACTATTAACCACCATTCTTCAGTGG
GCTGTGATTTTCAGAGGGGAATACTAAGAAATGGTTTTCCATACTGGAACCCAAAGGTAAAGACACTCAAGGACA
GACATTTTTTGGCAGAGCATAGATGAAAATGGCAAGTTCCCTGGCTTTCCTTCTGCTCAACTTTTCATGTCTCCCTC
TTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCTCTGGGCCCATCTGGCCATG
GTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGGTG
AGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGGAAAGACAGGCAGAGTGCACCATAT
CGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTACAGCC
TCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAGCTGAAGGTT
GCAGCATTGGGTCTGATCTTCACATTGAAGTGAAGGGTTATGAGGATGGAGGGATCCATCTGGAGTGCAGGTCC
ACTGGCTGGTACCCCCAACCCCAAATAAAGTGGAGCGACACCAAGGGAGAGAACATCCCGGCTGTGGAAGCACCT
GTGGTTGCAGATGGAGTGGGCCTGTATGCAGTAGCAGCATCTGTGATCATGAGAGGCAGCTCTGGTGGGGGTGTA
TCCTGCATCATCAGAAATTCCCTCCTCGGCCTGGAAAAGACAGCCAGCATATCCATCGCAGACCCCTTCTTCAGG
AGCGCCCAGCCCTGGATCGCGGCCCTGGCAGGGACCCTGCCTATCTCGTTGCTGCTTCTCGCAGGAGCCAGTTAC
TTCTTGTGGAGACAACAGAAGGAAAAAATTGCTCTGTCCAGGGAGACAGAAAAGAGAGCGAGAGATGAAAGAAATG
GGATACGCTGCAACAGAGCAAGAAATAAGCCTAAGAGAGAAGCTCCAGGAGGAACTCAAGTGGAGGAAAAATCCAG
TACATGGCTCGTGGAGAGAAGTCTTTGGCCTATCATGAATGGAAAATGGCCCTCTTCAAACCTGCGGATGTGATT
CTGGATCCAGACACGGCAAACGCCATCCTCCTTGTTTCTGAGGACCAGAGGAGTGTGCAGCGTGTGAAGAGCCG
CGGGATCTGCCAGACAACCCTGAGAGATTTGAATGGCGTTACTGTGTCTTGGCTGTGAAAACCTTCACATCAGGG
AGACATTACTGGGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGG
AAAAAAGGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCCTGACTGATGGGAATAAGTATCGG
GCTCTCACTGAGCCCAGAACCAACCTGAAACTTCCTGAGCCTCCTAGGAAAGTGGGGATCTTCTGGACTATGAG
ACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTCCGCACGCCTCTTTCTCTGAG
CCTCTATATCCTGTTTTGAGAATTTTGACCTTGGAGCCCACTGCCCTGACCATTTGCCCAATACCAAAAGAAGTA
GAGAGTCCCCCGATCCTGACCTAGTGCCTGATCATTCCCTGGAGACACCACTGACCCCGGGCTTAGCTAATGAA
AGTGGGGAGCCTCAGGCTGAAGTAACATCTCTGCTTCTCCCTGCCCCACCTGGAGCTGAGGTCTCCCTTCTGCA
ACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTTACTGATATTTCATTCCATTATTCCATATGA
CAGTTGTTTTGAGTTTCGTACCACCTTATTGTCCCTTATACAGATAAGGAAACTGGGGTGCAGAAAGGTGAATT
AACTTTACAAAGTAGACATGACAAGTGAACAGCAGAGCTGGGATCTAAACAGCAATAACTAACATTAACAGAGAA
TTTAAATGTTCTTAGTGCTGTGTTATAAGCTTTGGTGGATGTCACTCCTTTAATCCTCACAACACCCTGTCTGGG
TAGTCATATTTTGCAAGTATGGAAGCTGAGGCAGGGCAACATGAAGTAACTTACATAATTCATACAGTAATTTGT
GCAGTTGGGAGATGTTTCAGCCTTAGTCCCTGGCTAATTGCCTGTTCTTTTCCAGCCTGATTTTTTTTCCACAGG
AAGAGCCCATGTAGCCCTGAGGTTTCCTTCCCAGGACAGCTGCAGGGTAGAGATCATTTTAAAGTGCTTGTGGA
GTTGACATCCCTATTGACTCTTTCCCAGCTGATATCAGAGACTTAGACCCAGCACTCCTTGGATTAGCTCTGCAG
AGTGTCTTGGTTGAGAGAATAACCTCATAGTACCAACATGACATGTGACTTGGAAAGAGACTAGAGGCCACACTT
GATAAATCATGGGGCACAGATATGTTCCACCCAAACAAATGTGATAAGTGATTGTGCAGCCAGAGCCAGCCTTCC
TTCAATCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTCTCTGTGATATAGGAAATTTGGATCAAGGAAGCT
AAAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAATAGGTCTGTCCACTCCTGGTCA
TTGGTGGATGTTAAACCCATATTCTTTCAACTGCTGCCTGCTAGGGAAAAGTCTCCTCATTATCATCACTATT
ATTGCTCACCACCTGTATCCCTCTACTTGGCAAGTGGTTGTCAAGTTCTAGTTGTTCAATAAATGTGTTAATAAT
GAAAAAAAAA

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FIGURE 409

MKMASSLAFLLLNFHVSFLVQLLTPCSAQFSVLGSPGPILAMVGEDADLPCHLFPTMSAETMELRWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYL CYFQDGD FYEKALVELKVAALGSDL
HIEVKG YEDGGIHL ECRSTGWYPQPQIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIMRGSSGGGVSCIIRNS
LLGLEKTASIS IADPFFR SAQFWIAALAGTLPISLLLLAGASYFLWRQQKEKIALSRETEREREMKEMGYAATEQ
EISLREKLQEELKWRKIQYMARGEKSLAYHEWKMA LF KPADVILDPDTANAILLVSEDQRSVQRAEEPRLPDNP
ERFEWRYCVLGCENFTSGRHYWEVEVGDRKEWHIGVCSKNVERKKGWVKMTPENGYWTMGLTDGNKYRALTEPRT
NLKLPEPPRKVGIFLDYETGEISFY NATDGSHIYTFPHASFSEPLYPVFRILTLEPTALTICPIPKEVESSPDPD
LVPDHSLETPLTPGLANESGEPQAEVTSLLLPAHPGAEVSPSAT TNQNHKLQARTEALY

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FIGURE 410

CGCACTCCCTGCTGGGTGAGCAGCACTGTAAAGATGAAGCTGGCTAACTGGTACTGGCTGAGCTCAGCTGTTCTT
GCCACTTACGGTTTTTTTGGTTGTGGCAAACAATGAAACAGAGGAAATTAAAGATGAAAGAGCAAAGGATGTCTGC
CCAGTGAGACTAGAAAGCAGAGGGAAATGCGAAGAGGCAGGGGAGTGCCCCCTACCAGGTAAGCCTGCCCCCCTTG
ACTATTAGCTCCCGAAGCAATTCAGCAGGATCGAGGAGGTGTTCAAAGAAGTCCAAAACCTCAAGGAAATCGTA
AATAGTCTAAAGAAATCTTGCCAAGACTGCAAGCTGCAGGCTGATGACAACGGAGACCCAGGCAGAAACGGACTG
TTGTTACCCAGTACAGGAGCCCCGGGAGAGGTTGGTGATAACAGAGTTAGAGAATTAGAGAGTGAGGTAAACAAG
CTGTCTCTGAGCTAAAGAATGCCAAAGAGGAGATCAATGTACTTCATGGTCGCCTGGAGAAGCTGAATCTTGTA
AATATGAACAACATAGAAAATTATGTTGACAGCAAAGTGGCAAATCTAACATTTGTTGTCAATAGTTTGGATGGC
AAATGTTCAAAGTGTCAGCCAAAGAACAATAACAGTCACGTCCAGTTCAACATCTAATATATAAAGATTGCTCT
GACTACTACGCAATAGGCAAAGAAGCAGTGAGACCTACAGAGTTACACCTGATCCCCAAAATAGTAGCTTTGAA
GTTTACTGTGACATGGAGACCATGGGGGGAGGCTGGACAGTGCTGCAGGCACGTCTCGATGGGAGCACCAACTTC
ACCAGAACATGGCAAGACTACAAAGCAGGCTTTGGAAACCTCAGAAGGGAATTTTGGCTGGGGAACGATAAAATT
CATCTTCTGACCAAGAGTAAGGAAATGATTCTGAGAATAGATCTTGAAGACTTTAATGGTGTGCAACTATATGCC
TTGTATGATCAGTTTTATGTGGCTAATGAGTTTCTCAAATATCGTTTACACGTTGGTAAGTATAATGGCACAGCT
GGAGATGCATTACGTTTCAACAAACATTACAACCACGATCTGAAGTTTTTCACCACTCCAGATAAAGACAATGAT
CGATATCCTTCTGGGAACTGTGGGCTGTACTACAGTTCAGGCTGGTGGTTTGATGCATGTCTTTCTGCAAACCTTA
AATGGCAAATATTATCACCAAAAATACAGAGGTGTCCGTAATGGGATTTTCTGGGGTACCTGGCCTGGTGTAAGT
GAGGCACACCCTGGTGGCTACAAGTCCTCCTTCAAAGAGGCTAAGATGATGATCAGACCCAAGCACTTTAAGCCA
TAAATCACTCTGTTTCATTCTCCAGGTATTCGTTATCTAATAGGGCAATTAATTCCTTCAGCACTTTAGAATATG
CCTTGTTTCATATTTTTTCATAGCTAAAAATGTTTGACATCCTTTGAGATATTTTATTACTAAATCTGCC

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FIGURE 411

MKLANWYWLSSAVLATYGFLVVANNETEEIKDERAKDVCPVRLESRGKCEEAGECPYQVSLPPLTIQLPKQFSRI
EEVFKEVQNLKEIVNSLKKSCQDCKLQADDNGDPGRNGLLLPSTGAPGEVGDNRVRELESEVNKLSSSELKNAKEE
INVLHGRLEKLNLVNMNNIENYVDSKVANLTFVVNSLDGKCSKCPSQEQIQSRPVQHLYKDCSDYYAIGKRSSE
TYRVTPDPKNSSFEVYCDMETMGGGWTVLQARLDGSTNFTRTWQDYKAGFGNLRREFWLGNDKIHLLTKSKEMIL
RIDLEDFNGVELYALYDQFYVANEFLKYRLHVGNYNGTAGDALRFNKHYNHDLKFFTPDKDNDRYPSGNCGLYY
SSGWWFDACLSANLNGKYYHQKYRGVRNGIFWGTWPGVSEAHPPGGYKSSFKEAKMMIRPKHFKP

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FIGURE 412

TCCCAGCTGCGCGTTCGACGCTCCCGACGCGAGAAGGGCTGGAGTCGGCGTCCAGCCTAGAGCCCCGGTGGGAGCC
AGGCCGGGACGCGTGCACCAATGCCCTACCTGCTCATCAGCACCCAGATCCGCATGGAGGTGGGCCCCACTATGGT
GGGCGATGAACAGTCGGATCCAGAGCTGATGCAGCATCTGGGGGCTTCAAAGAGAAGAGCCTTGGGAAACAATT
TTATGAATACTACGTCGATGACCTCCCCGCATAGTCTGGACAAGCTGGAACGCAGGGGCTTCCGTGTGCTGAG
CATGACGGGGGTGGGCCAGACGCTGGTGTGGTGTCTGCACAAGGAGTTGACCTTCTCATGCTGATTTGCAGACGGG
GCACCCCTGTGGAGGGGCTGCTGTGGGCCCTGACCTCCAAGCTCCTGCCTCACCGTCTGCCTTGCTCCTCTCTTC
CCAAATCATCACCGCCATGGGCCAGCCCCAAAGGGCAGTGAATGGCCTTCTCTGAAACCCTGCGTCAAGCAGTG
GGAGAGGGCAGTGCCCGGTGCCCTGGTGTCTCCAGCTGCCCTCCTGCTTCGGGCCTGGGCCGAGGGCCTTGTGTA
GGCCATGTTCTCGGGCAGCTGCCCCGGGCCGGAGCTGGGCACTCCAGCGGCCCTGGCGCGTGGCTCCTGCATAG
CTAGCCCAAGCCAATAAAGGGCTGTGATGAGTGGCTGC

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FIGURE 413

MPYLLISTQIRMEVGPTMVGDEQSDPELMQHLGASKRRALGNNFYEYYVDDPPRIVLDKLERRGFRVLSMTGVGQ
TLVWCLHKE

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FIGURE 414

GCGTCTGCCAGGAGCTACGGCCGGAAGATGGCGGCGGCCGAGAGTTGTCGCTACTGGAGAAGTCCCTGGGACTG
AGTAAGGGGAATAAATACAGTGCTCAGGGCGAGCGACAGATTCCAGTTCTTCAGACAAACAATGGTCCAAGTCTA
ACAGGATTGACTACTATAGCAGCTCATCTAGTCAAGCAAGCCAACAAAGAATATTTGCTGGGGAGTACTGCAGAA
GAAAAAGCAATCGTTCAGCAGTGTTAGAATACAGGGTCACTCAAGTAGATGGGCACTCCAGTAAAAATGACATC
CACACACTGTTGAAGGATCTTAATTCATATCTTGAAGATAAAGTCTACCTTACAGGGTATAACTTTACATTAGCA
GATATACTATTGTACTATGGACTTCATCGCTTTATAGTTGACCTGACAGTTCAAGAAAAGGAGAAATATCTTAAT
GTGTCTCGCTGGTTTTGTACATTTCAGCATTATCCAGGCATCAGGCAACATCTGTCTAGTGTGCTTCATCAAG
AACAGACTATATACTAATTCCCACTTAGAAGCTGTCCATGCCATACAGAAGATCTATTAAGTGTTTTAAATGGA
AAATGTACTCTAGACCACAGGACTAATGTAAATTAATATACAGTCATTCAATTATTTGTTGAAGTTGATAGAATTT
TTGAAGTGTAACCTTGTGTCTGAATGTTTTATTTGTTCTTTAGCTGAAGTTTTGCAATTTTTATGTCAAAATTCA
ATTGCTATTAAACAAGTTGAGATCCAGTTATAAATTAACCTTGTTTTTAGTAGATGACATTTATTTCAATAAAAG
TTGCAATCGGGCTTAATCTTAAATTTGGTGGTCATTTCAATGGTTGACATATTTGGCTATTTATTAACCTCTCT
TTCATATTCTAAAATTCATTTTCCCCCTTATGGATATTTATGGTAGTTTGTAAAGAACTGATAAATGTGCCAAGG
AAGCCAAAAGGGAAGACAGATGGATTTGTTTTAAATGTTTATGTGAGCTAGTAAATGTGGGAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 415

MAAAEELSLEKSLGLSKGNKYSAQGERQIPVLQTNNGPSLTGLTTIAAHLVKQANKEYLLGSTAEKAIVQQWL
EYRVTQVDGHSSKNDIHTLLKDLNSYLEDKVYLTGYNFTLADILLYYGLHRFIVDLTVQEKEKYLNVSRLFCHIQ
HYPGIRQHLSSVVFIGNRLYTNSH

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FIGURE 416

CCGGGACTTTGCAGGCAGCGGGCGGGGGCGGAGCGGGATCGAGCCCTCGCCGAGGCCTGCCGCCATGGGCCC
GCGCCCGCCGCCCGCCTGTACCCGGGCGCGCGGGCCGTGAGCGTCATGGCCTTGGCCGGGGCCCCCTGCGGGC
GGCCCATGCGCGCCGGCGCTGGAGGCCCTGCTCGGGGCCGCGCGCTGCGGCTGCTCGACTCCTCGCAGATCGTC
ATCATCTCCGCCGCGCAGGACGCCAGCGCCCCGCGGCTCCCACCGGCCCCGCGGCGCCGCGCGGCCCTGC
GACCTTGACCTGCTGCTCTTCGCCACACCGCAGGCGCCCCGGCCACACCCAGTGCGCCGCGGGCCGCGCTCGGC
CGCCCCCGGGTGAAGCGGAGGCTGGACCTGGAACTGACCATCAGTACCTGGCCGAGAGCAGTGGGCCAGCTCGG
GGCAGAGGCCGCCATCCAGGAAAAGGTGTGAAATCCCCGGGGGAGAAGTCACGCTATGAGACCTCACTGAATCTG
ACCACCAAGCGCTTCCTGGAGCTGCTGAGCCACTCGGCTGACGGTGTCTGCGACCTGAACTGGGCTGCCGAGGTG
CTGAAGGTGCAGAAGCGGCGCATCTATGACATACCAACGTCCTTGAGGGCATCCAGCTCATTGCCAAGAAGTCC
AAGAACCACATCCAGTGGCTGGGCAGCCACACCACAGTGGGCGTCGGCGGACGGCTTGAGGGGTTGACCCAGGAC
CTCCGACAGCTGCAGGAGAGCGAGCAGCTGGACCACCTGATGAATATCTGTACTACGCAGCTGCGCCTGCTC
TCCGAGGACACTGACAGCCAGCGCCTGGCCTACGTGACGTGTGAGGACCTTCGTAGCATTGCAGACCCTGCAGAG
CAGATGGTTATGGTGATCAAAGCCCCCTCCTGAGACCCAGCTCCAAGCCGTGGACTCTTCGGAGAACCTTCAGATC
TCCCTTAAGAGCAAACAAGGCCCGATCGATGTTTTCTGTGCCCTGAGGAGACCGTAGGTGGGATCAGCCCTGGG
AAGACCCCATCCCAGGAGGTCACTTCTGAGGAGGAGAACAGGGCCACTGACTCTGCCACCATAGTGTACCACCA
CCATCATCTCCCCCTCATCCCTCACCACAGATCCCAGCCAGTCTCTACTCAGCCTGGAGCAAGAACCGCTGTTG
TCCCGGATGGGCAGCCTGCGGGCTCCCGTGGACGAGGACCGCCTGTCCCCGCTGGTGGCGGCCGACTCGCTCCTG
GAGCATGTGCGGGAGGACTTCTCCGGCCTCCTCCCTGAGGAGTTCATCAGCCCTTCCCCACCCACGAGGCCCTC
GACTACCACTTCGGCCTCGAGGAGGGCGAGGGCATCAGAGACCTCTTCGACTGTGACTTTGGGGACCTCACCCCC
CTGGATTTCTGACAGGGCTTGAGGGGACCAGGGTTTTCCAGAGTAGCTCACCTTGTCTCTGCAGCCCTGGAGCCCC
CTGTCCCTGGCCGTCTTCCAGCCTGTTTGAAACATTTAATTTATACCCCTCTCCTCTGTCTCCAGAAGCTTCT
AGCTCTGGGGTCTGGCTACCGCTAGGAGGCTGAGCAAGCCAGGAAGGAAGGAGTCTGTGTGGTGTGTATGTGCA
TGCAGCCTACACCCACACGTGTGTACCGGGGTGAATGTGTGTGAGCATGTGTGTGTGCATGTACCGGGGAATGA
AGGTGAACATACACCTCTGTGTGTGCACTGCAGACACGCCCCAGTGTGTCCACATGTGTGTGCATGAGTCCATCT
CTGCGCGTGGGGGGGCTCTAACTGCACTTTCGGCCCTTTTGCTCGTGGGGTCCACAAGGCCAGGGCAGTGCCT
GCTCCAGAACTCTGGTGCTCTGACCAGGCCAGGTGGGGAGGCTTTGGCTGGCTGGGCGTGTAGGACGGTGAGAGC
ACTTCTGTCTTAAAGGTTTTTCTGATTGAAGCTTTAATGGAGCGTTATTTATTTATCGAGGCCTCTTTGGTGAG
CCTGGGGAATCAGCAAAAGGGGAGGAGGGGTGTGGGGTTGATACCCAACTCCCTCTACCCTTGAGCAAGGGCAG
GGGTCCCTGAGCTGTTCTTCTGCCCCATACTGAAGGAAGTGAAGCCTGGGTGATTTATTTATTGGGAAAGTGAGG
GAGGGAGACAGACTGACTGACAGCCATGGGTGGTCAGATGGTGGGGTGGGCCCTCTCCAGGGGGCCAGTTCAGGG
CCCAGCTGCCCCCAGGATGGATATGAGATGGGAGAGGTGAGTGGGGGACCTTCACTGATGTGGGCAGGAGGGGT
GGTGAAGGCCTCCCCAGCCAGACCCTGTGGTCCCTCCTGCAGTGTCTGAAGCGCCTGCCTCCCCACTGCTCTG
CCCCACCTCCAATCTGCACCTTGATTGCTTCCTAACAGCTCTGTTCCCTCCTGCTTTGGTTTTAATAAATATT
TTGATGACGTT

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FIGURE 417

MALAGAPAGGPCAPALEALLGAGALRLLDSSQIVIIISAAQDASAPPAPTGPAAAPAAGPCDPDLLLFATPQAPRPT
PSAPRPALGRPPVKRRRLDLETDHQYLAESSGPARGRGRHPGKGVKSPGEKSRYETSLNLTTRKRFLELLSHSADGV
VDLNWAAEVLKVQKRRIYDITNVLEGIQLIAKSKNHIQWLGSHTTVGVGGRLEGLTQDLRQLQESEQQLDHLMN
ICTTQLRLLSLEDTSQRLAYVTCQDLRSIADPAEQMVMVIKAPPETQLQAVDSSNFQISLKSQGPIDVFLCPE
ETVGGISPGKTPSQEVTSEENRATDSATIVSPPPSSPPSSLTTDPSQSLLSLEQEPLLSRMGSLRAPVDEDRLS
PLVAADSLLEHVREDFSGLLPEEFISLSPPEALDYHFGLEEGERIDLDFDCDFGDLTPLDF

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FIGURE 418

CCTTGCTATAGAAGACCTGGGACAGAGGACTGCTGTCTGCCCTCTCTGGTCACCCTGCCTAGCTAGAGGATCTGT
GACCCAGCCATGAGGACCCTCGCCATCCTTGCTGCCATTCTCCTGGTGGCCCTGCAGGCCCAGGCTGAGCCACT
CCAGGCAAGAGCTGATGAGGTTGCTGCAGCCCCGGAGCAGATTGCAGCGGACATCCCAGAAGTGGTTGTTTCCCT
TGCATGGGACGAAAGCTTGGCTCCAAAGCATCCAGGCTCAAGGAAAAACATGGACTGCTATTGCAGAATACCAGC
GTGCATTGCAGGAGAACGTCGCTATGGAACCTGCATCTACCAGGGAAGACTCTGGGCATTCTGCTGCTTGAGCTTG
CAGAAAAAGAAAAATGAGCTCAAATTTGCTTTGAGAGCTACAGGGAATTGCTATTACTCCTGTACCTTCTGCTC
AATTCCTTTCCTCATCTCAAATAAATGCCTTGTTAC

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FIGURE 419

MRTLAILAAILLVALQAQAEPLQARADEVAAPEQIAAD IPEVVVSLAWDESLAPKHGSRKNMDCYCRIPACIA
GERRYGTCTIYQGRLWAFCC

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FIGURE 420

AGCGGGTGCGGGGCGGGACCGGCCCCGGCCTATATATTGGGTTGGCGCCGGCGCCAGCTGAGCCGAGCGGTAGCTG
GTCTGGCGAGGTTTTATACACCTGAAAAGAAGAGAAATGTCAAGACGAAGTAGCCGTTTACAAGCTAAGCAGCAGCC
CCAGCCCAGCCAGACGGAATCCCCCAAGAAGCCAGATAATCCAGGCCAAGAAGAGGAAAACTACCCAGGATGT
CAAAAAAAGAAGAGAGGAGGTACCAAGAAACATCAGTATGAAATTAGGAATTGTTGGCCACCTGTATTATCTGG
GGGATCAGTCCTTGCATTATCATTGAAACACCTCACAAAGAAATAGGAACAAGTGATTTCTCCAGATTTACAAA
TTACAGATTTAAAAATCTTTTTATTAATCCTTCACCTTTGCCTGATTTAAGCTGGGGATGTTCAAAAGAAGTCTG
GCTAAACATGTTAAAAAAGGAGAGCAGATATGTTTCATGACAAACATTTTGAAGTTCTGCATTCTGACTTGGAACC
ACAGATGAGGTCCATACTTCTAGACTGGCTTTTAGAGGTATGTGAAGTATACACACTTCATAGGGAAACATTTTA
TCTTGACAAAGACTTTTTTGATAGATTTATGTTGACACAAAAGGATATAAATAAAAAATATGCTTCAACTCATTGG
AATTACCTCATTATTTCATTGCTTCCAACTTGAGGAAATCTATGCTCCTAACTCCAAGAGTTTGCTTACGTCAC
TGATGGTGCTTGCAGTGAAGAGGATATCTTAAGGATGGAACCTCATTATATTAAAGGCTTTAAATGGGAACTTTG
TCCTGTAACAATCATCTCCTGGCTAAATCTCTTCTCCAAGTTGATGCTCTTAAAGATGCTCCTAAAGTTCTTCT
ACCTCAGTATTCTCAGGAAACATTCATTCAAATAGCTCAGCTTTTAGATCTGTGTATTCTAGCCATTGATTCAAT
AGAGTTCCAGTACAGAATACTGACTGCTGCTGCCTTGTGCCATTTTACCTCCATTGAAGTGGTTAAGAAAGCCTC
AGGTTTGGAGTGGGACAGTATTTCAGAATGTGTAGATTGGATGGTACCTTTTGTCAATGTAGTAAAAAGTACTAG
TCCAGTGAAGCTGAAGACTTTTAAAGAAGATTCCATGGAAGACAGACATAATATCCAGACACATACAACTATTT
GGCTATGCTGGAGGAAGTAAATTACATAAACACCTTCAGAAAAGGGGGACAGTTGTCACCAGTGTGCAATGGAGG
CATTATGACACCACCGAAGAGCACTGAAAAACCACAGGAAAACACTAAAGAAGATAACTAAGCAAACAAGTTGG
AATTCACCAAGATTGGGTAGAAGTGGTATCACTGAACTACTAAAGTTTTACAGAAAAGTAGTGCTGTGATTGATTG
CCCTAGCCAATTCACAAAGTTACACTGCCATTCTGATTTTTAAACTTTACAATTGGCACTAAAGAATACATTTAATT
ATTTCCCTATGTTAGCTGTTAAAGAAACAGCAGGACTTGTTTACAAAGATGTCTTCATTCCCAAGGTTACTGGATA
GAAGCCAACCACAGTCTATACCATAGCAATGTTTTTCTTTAATCCAGTGTTACTGTGTTTATCTTGATAAACTA
GGAATTTTGTCACTGGAGTTTGGACTGGATAAGTGCTACCTTAAAGGGTATACTAAGTGATACAGTACTTTGAA
TCTAGTTGTTAGATTCTCAAAATTCCTACACTCTTGACTAGTGCAATTTGGTTCTTGAAAATTAAATTTAACTT
GTTTACAAAGGTTTAGTTTTGTAATAAGGTGACTAATTTATCTATAGCTGCTATAGCAAGCTATTATAAACTTG
AATTTCTACAAATGGTGAAATTTAATGTTTTTTAACTAGTTTATTTGCCTTGCCATAACACATTTTTTAACTAA
TAAGGCTTAGATGAACATGGTGTCAACCTGTGCTCTAAACAGTGGGAGTACCAAAGAAATTATAAACAAGATAA
ATGCTGTGGCTCCTTCCTAACTGGGGCTTTCTTGACATGTAGTTGCTTGGAATAACCTTTTTGTATATCACAA
TTTGGGTGAAAACTTAAGTACCCTTTCAAACATTTTATATGAGGAAGTCACTTTACTACTCTAAGATATCCCTA
AGGAATTTTTTTTTTTAATTTAGTGTGACTAAGGCTTTATTTATGTTTGTGAACTGTTAAGGTCCTTTCTAAAT
TCCTCCATTGTGAGATAAGGACAGTGTCAAAGTGATAAAGCTTAACACTTGACCTAACTTCTATTTTCTTAAGG
AAGAAGAGTATTAAATATATACTGACTCCTAGAAATCTATTTATTAAGGACATGAAAACCTTGCTGTACATA
GGCTAGCTATTTCTAAATATTTTAAATTAGCTTTTCTAAAAAATAATCCAGCCTCATAAAGTAGATTAGAAAAC
TAGATTGCTAGTTTATTTTGTATCAGATATGTGAATCTCTTCTCCCTTTGAAGAACTATACATTTATTGTTAC
GGTATGAAGTCTTCTGTATAGTTTGTTTTTAACTAATATTTGTTTCAGTATTTTGTCTGAAAAGAAAACACCAC
TAATTGTGTACATATGTATTATATAAACTTAACCTTTTAATACTGTTTATTTTGTAGCCATTGTTTAAAAAATAA
AAGTTAAAAAATTTAACTGCTTAAAGTAAAAAATAAAAAAAAAAAAAA

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FIGURE 421

MSRRSSRLQAKQOPQPSQTESPQEAQIIQAKKRKTTQDVKKRREEVTKKHQYEIRNCWPPVLSGGISPCIIETP
HKEIGTSDFSRTNYRFKNLFINPSPLPDLSWGCSKEVWLNMLKKESRYVHDKHFEVLHSDLEPQMRSILLDWLL
EVCEVYTLHRETFYLAQDFFDRFMLTQKDINKNMLQLIGITSLFIASKLEEIYAPKLQEFAYVTDGACSEEDILR
MELIILKALKWELCPVTIISWLNLFLOVDALKDAPKVLLPOYSQETFIQIAQLLDLCILAIIDSLEFQYRILTAAA
LCHFTSIEVVKKASGLEWDSISECVDMVFPFVN VVKSTSPVKLKTFFKIPMEDRHNIQHTNYLAMLEEVNYINT
FRKGGQLSPVCNGGIMTPPKSTEKPPGKH

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FIGURE 422

AAACTTCCCGCACGCGTTACAGGAGCCAGGTGCGGTATAAGCGCCAGCGGCCTCGCCGCCCGTCAAGCTGTCCACA
TCCCTGGCCTCAGCCCGCCACATCACCCTGACCTGCTTACGCCCAGATTTTCTTCAATCACATCTGAATAAATCA
CTTGAAGAAAGCTTATAGCTTCATTGCACCATGTGTGGCATTGTTGGGCGCTGTTTGGCAGTGATGATTGCCTTTCT
GTTCAGTGTGTGAGTGCTATGAAGATTGCACACAGAGGTCCAGATGCATTCCGTTTTGAGAATGTCAATGGATAC
ACCAACTGCTGCTTTGGATTTCACCGGTTGGCGGTAGTTGACCCGCTGTTTGAATGCAGCCAATTTCAGTGAAG
AAATATCCGTATTTGTGGCTCTGTTACAATGGTGAAATCTACAACCATAAGAAGATGCAACAGCATTGTTGAATTT
GAATACCAGACCAAAGTGATGGTGAGATAATCCTTCATCTTTATGACAAAGGAGGAATTGAGCAAACAATTTGT
ATGTTGGATGGTGTGTTTGCATTTGTTTTACTGGATACTGCCAATAAGAAAGTGTTCCTGGGTAGAGATACATAT
GGAGTCAGACCTTTGTTTAAAGCAATGACAGAAGATGGATTTTTGGCTGTATGTTTCAAGCTAAAGGTCTTGTT
ACATTGAAGCACTCCGCGACTCCCTTTTTTAAAGTGGAGCCTTTTCTTCTGGACACTATGAAGTTTTGGATTTA
AAGCCAAATGGCAAAGTTGCATCCGTGGAATGGTTAAATATCATCACTGTGCGGATGAACCCCTGCACGCCCTC
TATGACAATGTGGAGAACTCTTCCAGTTTTGAGATAGAACTGTGAAGAACAACCTCAGGATCCTTTTTTAAT
AATGCTGTAAAGAAACGTTTGATGACAGACAGAAGGATTGGCTGCCTTTTATCAGGGGGCTTGGACTCCAGCTTG
GTTGCTGCCACTCTGTTGAAGCAGCTGAAAGAAGCCCAAGTACAGTATCCTCTCCAGACATTTGCAATTGGCATG
GAAGACAGCCCCGATTTACTGGCTGCTAGAAAGGTGGCAGATCATATTGGAAGTGAACATTATGAAGTCCTTTTT
AACTCTGAGGAAGGCATTACAGGCTCTGGATGAAGTCATATTTTCTTGGAACTTATGACATTACAACAGTTTCGT
GCTTCAGTAGGTATGTATTTAATTTCCAAGTATATTGGAAGAACACAGATAGCGTGGTGATCTTCTCTGGAGAA
GGATCAGATGAACTTACGCAGGGTTACATATATTTTACAAGGCTCCTTCTCCTGAAAAAGCCGAGGAGGAGAGT
GAGAGGCTTCTGAGGGAACCTATTTGTTTGATGTTCTCCGCGCAGATCGAACTACTGCTGCCCATGGTCTTGAA
CTGAGAGTCCCATTCTAGATCATCGATTTTCTTCTATTACTTGTCTCTGCCACCAGAAATGAGAATTCCAAAG
AATGGGATAGAAAAACATCTCCTGAGAGAGACGTTTGAGGATTCCAATCTGATACCCAAAGAGATTCTCTGGCGA
CCAAAAGAAGCCTTCAGTGATGGAATAACTTCAGTTAAGAATTCCTGGTTTAAGATTTTACAGGAATACGTTGAA
CATCAGGTTGATGATGCAATGATGGCAAATGCAGCCAGAAATTTCCCTTCAATACTCCTAAAACCAAAGAAGGA
TATTACTACCGTCAAGTCTTTGAACGCCATTACCCAGGCCGGGCTGACTGGCTGAGCCATTACTGGATGCCCAAG
TGGATCAATGCCACTGACCTTCTGCCCCGACGCTGACCCACTACAAGTCAGCTGTCAAAGCTTAGGTGGTCTTT
ATGCTGTAATGTGAAAGCAAATATTTCTTCGTGTTGGATGGGGACTGTGGGTAGATAGGGGAACAATGAGAGTCA
ACTCAGGCTAACTTGGGTGTGAAAAAATAAAAGTCCTAAATCT

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FIGURE 423

MCGIWALFGSDDCLSVQCLSAMKIAHRGPDAFRFENVNGYTNCCFGFHLAVVDPLFGMQPIRVKKYPYLWLCYN
GEIYNHKKMQQHFEFEYQTKVDGEIILHLYDKGGIEQTICMLDGVFAFVLLDTANKKVFLGRDYGVRPLFKAMT
EDGFLAVCSEAKGLVTLKHSATPFLKVEPFLPGHYEVLDLKPNGKVASVEMVKYHHCRCDEPLHALYDNVEKLFPG
FEIETVKNNLRILFNNAVKKRLMTDRRIGCLLSGGLDSSLVAATLLKQLKEAQVQYPLQTFAIMEDSPDLLAAR
KVADHIGSEHYEVLFNSEEGIQALDEVIFSLETYDITTVRASVGMYLISKYIRKNTDSVVIFSGEGSDELTQGYI
YFHKAPSPEKAEESERLLRELYLFDVLRADRTTAAHGLELRVPFLDHRFSSYYLSLPPEMRIPKNGIEKHLLRE
TFEDSNLIPKEILWRPKEAFSDGITSVKNSWFKILQEYVEHQVDDAMMANAAQKFPFNTPKTKEGYYYRQVFERH
YPGRADWLSHYWMPKWINATDPSARTLTHYKSAVKA

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FIGURE 424

GGCACGAGGCAGCAAAATGGCGCCAGAACTAGTGGCGGGCTGAGGACGCCGTACCCCTCGGAAGGCAGCCCTGCG
GTCCCTTTGCCGCCCGTTCCCTCCCGGACATGGAGGACGTGGAGGCGCGCTTCGCCACCTCTTGACAGCCCATCC
GCGACCTACCAAGAACTGGGAGGTGGACGTGGCGGCCAGCTGGGCGAGTATCTGGAGGAGCTGGATCAGATCT
GCATTTCTTTTGACGAAGGCAAGACCACAATGAACTTCATTGAGGCAGCGTTGTTGATCCAGGGCTCTGCCTGCG
TCTACAGTAAGAAGGTGGAATACCTCTACTCACTCGTCTACCAGGCCCTTGATTTTCATCTCTGGAAGAGGCGGG
CCAAGCAGCTCTCTTCGGTGCAGGAGGACAGGGCCAATGGGGTTGCCAGCTCCGGGGTCCCCAGGAGGCAGAGA
ATGAGTTCCTGTCGCTGGATGACTTCCCTGACTCCCGGACTAACGTGGATCTCAAGAATGATCAGACGCCCAGTG
AGGTCCTCATCATCCCCCTCTGCCC**ATC**GGCCCTGGTGGCCCCCTGATGAAATGGAGAAGAACAACAATCCCCGT
ACAGCCGTCAGGGTGAGGTCTGGCCAGCCGGAAGGATTCAGGATGAACACGTGCGTTCCCCACCCAGAGGGG
CCTTCATGTTGGAGCCAGAGGGCATGTCCCCCATGGAACCAGCGGGCGTTTCCCCCATGCCAGGGACCCAGAAGG
ACACCGGGAGGACTGAGGAGCAGCCAATGGAAGTTTCCGTGTGCAGGAGCCCTGTCCCAGCACTCGGCTTCTCCC
AGGAGCCAGGCCCTCTCCAGAAGGCCCGATGCCCCCTGGGTGGGGGCGAGGACGAGGATGCAGAGGAGGCAGTAG
AGCTTCCTGAGGCCTCGGCCCCCAAGGCCGCTCTGGAGCCCAAGGAGTCCAGGAGCCCGCAGCAGGTGGGACCCA
CATGGAGGCCTGCAGAACCTGAGCTGTGAACTGGCAACCCTGGCTCTGGGGCCGAGTCACCTTGACACAAGGAGGA
CAGTGGTATGGCCTTGGCCCCAGACCACTGGTCTGGGGCAGAAGCCACCTGTCTTGACAGCCCGTCCTGCAACCA
GCCCTTTTGAAGAGCAGCTTCTGTGTTCCCTCCCTCTCTGAGCAGAACTGATGCTCCTCAGAGTAGTGGGCTGGC
GTCCAAGGATTTGAGCCCTGTGAGCTCACGGCAACCTGGGATGGCCGCCGTTGCCAAGGCGCTCTCTGCAGT
CGGGCTGGTAGGAGGGAGTGTCTGGAGGCCATTGCTGCCTCCCTCAACCCCGGGGTCAACTGTACCCAGCCTAG
AGCCAAGAAATCCTTCCTTTTTATTTCATTAAACAAAATCAACCTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 425

MALVAPDEMEKINNPLYSRQGEVLASRKDFRMNTCVPHPRRAFMLEPEGMSPMEPAGVSPMPGTQNDTGRTEEQP
MEVSVC RSPVPALGFSQEPGPS PERPMP LGGGEDED AEEAVELPEASAPKAALEPKESRSPQOSAALPRRYMLRE
REGAPEPASCVKETPD LWQSLDPLNSLESKPFFKKGRPYSVPPC VEEALGQKRKRKGAAKLQDFHQWYLVAYADHA
DSRRLRRKGPSFADMEVLYWTHVKEQLETLRKLQRREVAEQWLRPAEEDHLEDSPGRPGGSR

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FIGURE 426

TTGGAACCAGAGAGAAGCCGGGATGGAAACTCCAAACACCACAGAGGACTATGACACGACCACAGAGTTTGACTA
TGGGGATGCAACTCCGTGCCAGAAGGTGAACGAGAGGGCCTTTGGGGCCCAACTGCTGCCCCCTCTGTACTCCTT
GGTATTTGTCATTGGCCTGGTTGGAAACATCCTGGTGGTCCTGGTCCTTGTGCAATACAAGAGGCTAAAAAACAT
GACCAGCATCTACCTCCTGAACCTGGCCATTTCTGACCTGCTCTTCCTGTTACGCTTCCCTTCTGGATCGACTA
CAAGTTGAAGGATGACTGGGTTTTTGGTGATGCCATGTGTAAGATCCTCTCTGGGTTTTATTACACAGGCTTGTA
CAGCGAGATCTTTTTTCATCATCCTGCTGACGATTGACAGGTACCTGGCCATCGTCCACGCCGTGTTTGCCTTGCG
GGCACGGACCGTCACTTTTGGTGTCATCACCAGCATCATCTTTGGGCCCTGGCCATCTTGCTTCCATGCCAGG
CTTATACTTTTCCAAGACCCAATGGGAATTCACCTACCACACCTGCAGCCTTCACTTTTCTCACGAAAGCCTACG
AGAGTGGAAGCTGTTTCAGGCTCTGAACTGAACCTCTTTGGGCTGGTATTGCCTTTGTTGGTTCATGATCATCTG
CTACACAGGGATTATAAAGATTCTGCTAAGACGACCAAATGAGAAGAAATCCAAAGCTGTCCGTTTGATTTTGT
CATCATGATCATCTTTTTTCTCTTTTGGACCCCTACAATTTGACTATACTTATTTCTGTTTTCCAAGACTTCCT
GTTCACCCATGAGTGTGAGCAGAGCAGACATTTGGACCTGGCTGTGCAAGTGACGGAGGTGATCGCCTACACGCA
CTGCTGTGTCAACCCAGTGATCTACGCCTTCGTTGGTGAGAGGTTCCGGAAGTACCTGCGGCAGTTGTTCCACAG
GCGTGTGGCTGTGCACCTGGTTAAATGGCTCCCTTCTCTCCGTGGACAGGCTGGACAGGGTCAGCTCCACATC
TCCCTCCACAGGGGAGCATGAACTCTCTGCTGGGTTCTGAGCTCAGACCATAGGAGGCCAACCCTAAAGCAGG
CGTGACCTGCCAGGCACACTGAGCCAGCAGCCTGGCTCTCCAGCCAGGTTCTGACTCTTGGCACAGCATGGAGT
CACAGCCACTTGGGATAGAGAGGGAATGTAATGGTGGCCTGGGGCTTCTGAGGCTTCTGGGGCTTCAGTCTTTTC
CATGAACTTCTCCCCTGGTAGAAAGAAGATGAATGAGCAAAACCAAATATTCCAGAGACTGGGACTAATGTACCA
GAGAAGGGCTTGGACTCAAGCAAGATTTAGATTTGTGACCATTAGCATTTGTCAACAAAGTCACCCACTTCCCA
CTATTGCTTGCACAAACCAATTAAACCCAGTAGTGGTGACTGTGGGCTCCATTCAAAGTGAGCTCCTAAGCCATG
GGAGACACTGATGTATGAGGAATTTCTGTTCTTCCATCACCTCCCCCCCCCGCCACCCTCCCCTGCCAAAGAA
CTTGGAATAGTGATTTCCACAGTGACTCCACTCTGAGTCCCAGAGCCAATCAGTAGCCAGCATCTGCCTCCCCCT
TCACTCCCACCGCAGATTTGGGCTCTTGGAATCCTGGGGAACATAGAACTCATGACGGAAGAGTTGAGACCTAAC
GAGAAATAGAAATGGGGAACTACTGCTGGCAGTGGAATAAGAAAGCCCTTAGGAAGAATTTTTATATCCACTAA
AATCAAACAATTCAGGGAGTGGGCTAAGCACGGGCCATATGAATAACATGGTGTGCTTCTTAAATAGCCATAAA
GGGGAGGGACTCATCATTTCCATTTACCCTTCTTTTCTGACTATTTTTCAGAACTCTCTTCTTTTCAAGTTGGG
TGATATGTTGGTAGATTCTAATGGCTTTATTGCAGCGGTTAATAACAGGCAAAAGGAAGCAGGGTTGGTTTCCCT
TCTTTTGTCTTCTCATCTAAGCCTTCTGGTTTTATGGGTCAGAGTTCGCACTGCCATCTTGACTTGTGAGCAAA
AAAAATAATAATAATAATAAAGGCCTGCTGTGTAAGCTGACAGTATTGTAGCTGATAGGGGGTTGGGAGGA
AGTGTCTACTAGGAGGGTGGGTGAGATCTGTGTTGATGT

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FIGURE 427

METPNTTEDYDTTTEFDYGDATPCQKVNERAFGAQLLPPLYSLVFVIGLVGNILVVLVLVQYKRLKNMTSIYLLN
LAISDLLFLETLFPWIDYKLKDDWVFGDAMCKILSGFYTGLYSEIFFIILLTIDRYLAIVHAVFALRARTVTFG
VITSIIIWALAILASMPGLYFSKTQWEFTHHTCSLHFPHESLREWKLFQALKLNLFGLVLPLLVMIICYTGIKI
LLRRPNEKKSKAVRLIFVIMIIFFLFWTPYNLTILISVFQDFLETHECEQSRHLDLAVQVTEVIAYTHCCVNPVI
YAFVGERFRKYLRQLFHRRVAVHLVKWLPFLSVDRLDRVSSTSPSTGEHELSAGF

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FIGURE 428

GGCACGAGCCCAGAAACAAAGACTTCACGGACAAAGTCCCTTGGAACCAGAGAGAAGCCGGGATGGAAACTCCAA
ACACCACAGAGGACTATGACACGACCACAGAGTTTGACTATGGGGATGCAACTCCGTGCCAGAAGGTGAACGAGA
GGGCCTTTGGGGCCCAACTGCTGCCCCCTCTGTACTCCTTGGTATTTGTCATTGGCCTGGTTGGAAACATCCTGG
TGGTCCTGGTCCTTGTGCAATACAAGAGGCTAAAAAACATGACCAGCATCTACCTCCTGAACCTGGCCATTTCTG
ACCTGCTCTTCCCTGTTACGCTTCCCTTCTGGATCGACTACAAGTTGAAGGATGACTGGGTTTTTGGTGATGCCA
TGTGTAAGATCCTCTCTGGGTTTTATTACACAGGCTTGTAACAGCGAGATCTTTTTTCATCATCCTGCTGACGATTG
ACAGGTACCTGGCCATCGTCCACGCCGTGTTTGCTTGCGGGCACGGACCGTCACTTTTGGTGTCATCACCAGCA
TCATCATTTGGGCCCTGGCCATCTTGGCTTCCATGCCAGGCTTATACTTTTCCAAGACCCAATGGGAATTCACCTC
ACCACACCTGCAGCCTTCACTTTCTCAGAAAGCCTACGAGAGTGGAAGCTGTTTCAGGCTCTGAAACTGAACC
TCTTTGGGCTGGTATTGCCTTTGTTGGTCATGATCATCTGCTACACAGGGATTATAAAGATTCTGCTAAGACGAC
CAAATGAGAAGAAATCCAAAGCTGTCCGTTTGATTTTTGTCATCATGATCATCTTTTTTCTCTTTTGGACCCCT
AC/ATTTGACTATACTTATTTCTGTTTTCCAAGACTTCCTGTTACCCATGAGTGTGAGCAGAGCAGACATTTGG
ACCTGGCTGTGCAAGTGACGGAGGTGATCGCCTACACGCACTGCTGTGTCAACCCAGTGATCTACGCCCTTCGTTG
GTGAGAGGTTCCGGAAGTACCTGCGGCAGTTGTTCCACAGGCGTGTGGCTGTGCACCTGGTTAAATGGCTCCCT
TCCTCTCCGTGGACAGGCTGGAGAGGGTCAGCTCCACATCTCCCTCCACAGGGGAGCATGAACTCTCTGCTGGGT
TCTTGACTCAGACCATAGGAGGCCAACCCAAAATAAGCAGGCGTGACCTGCCAGGCACACTGAGCCAGCAGCCTGG
CTCTCCCAGCCAGGTTCTGACTCTTGGCACAGCATGGAGTCACAGCCACTTGGGATAGAGAGGGAATGTAATGGT
GGCCTGGGGCTTCTGAGGCTTCTGGGGCTTCAGTCTTTTCCATGAACTTCTCCCCTGGTAGAAAGAAGATGAATG
AGCAAAACCAAATATTCCAGAGACTGGGACTAAGTGTACCAGAGAAGGGCTTGGACTCAAGCAAGATTTAGATT
TGTGACCATTAGCATTTGTCAACAAAGTCACCCACTTCCCACTATTGCTTGCACAAACCAATTAAACCCAGTAGT
GGTGACTGTGGGCTCCATTCAAAGTGAGCTCCTAAGCCATGGGAGACACTGATGTATGAGGAATTTCTGTTCTTC
CATCACCTCCCCCCCCCGCCACCCTCCCACTGCCAAGAACTTGAAATAGTGATTTCCACAGTGACTCCACTCT
GAGTCCCAGAGCCAATCAGTAGCCAGCATCTGCCTCCCCTTCACTCCCACCGCAGGATTTGGGCTCTTGGAATCC
TGGGGAACATAGAACTCATGACGGAAGAGTTGAGACCTAACGAGAAATAGAAATGGGGGAACACTGCTGGCAGT
GGAATAAGAAAGCCCTTAGGAAGAATTTTATATCCACTAAAATCAAACAATTCAGGGAGTGGGCTAAGCACGG
GCCATATGAATAACATGGTGTGCTTCTTAAAATAGCCATAAAGGGGAGGGACTCATCATTTCCATTTACCCTTCT
TTTCTGACTATTTTTTCAGAATCTCTCTTCTTTTCAAGTTGGGTGATATGTTGGTAGATTCTAATGGCTTTATTGC
AGCGATTAATAACAGGCAAAAGGAAGCAGGGTTGGTTTCCCTTCTTTTTGTTCTTCATCTAAGCCTTCTGGTTTT
ATGGGTCAGAGTTCGCACTGCCATCTTGGACTTGTACAGCAAAAAAAAAAAAAAAAAA

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FIGURE 429

METPNTTEDYDTTTEFDYGDATPCQKVNERAFGAQLLPPLYSLVFVIGLVGNILVVLVLVQYKRLKNMTSIYLLN
LAISDLLFLETLFPWIDYKLKDDWVFGDAMCKILSGFYTGlySEIFFIILLTIDRYLAIVHAVFALRARTVTFG
VITSIIIWALAILASMPGLYFSKTQWEFTHHTCSLHFPHESLREWKLFOALKLNLFGLVLPLLVMIICYTGIIKI
LLRRPNEKKSKAVRLIFVIMIIFFLFWTPYNLTILISVFQDFLFTHCEQSRHLDLAVQVTEVIAYTHCCVNPVI
YAFVGERFRKYLRQLFHRRVAVHLVKWLPFLSVDRLERVSSTSPSTGEHELSAGF

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FIGURE 430

AAGGACACGGGCAGCAGACAGTGGTCAGTCCTTTCTTGGCTCTGCTGACACTCGAGCCCACATTCCGTACCTGC
TCAGAATCATGCAGGTCTCCACTGCTGCCCTTGCTGTCCTCCTCTGCACCATGGCTCTCTGCAACCAGTTCTCTG
CATCACTTGCTGCTGACACGCCGACCGCCTGCTGCTTCAGCTACACCTCCCGGCAGATTCCACAGAATTTCATAG
CTGACTACTTTGAGACGAGCAGCCAGTGCTCCAAGCCCGGTGTCACTTCCTAACCAAGCGAAGCCGGCAGGTCT
GTGCTGACCCCAAGTGAGGAGTGGGTCCAGAAATATGTCAGCGACCTAGAGCTGAGTGCCTGAGGGGTCCAGAAGC
TTCGAGGCCCAGCGACCTCGGTGGGCCAGTGGGGAGGAGCAGGAGCCTGAGCCTTGGGAAACATGCGTGTGACCT
CCACAGCTACCTCTTCTATGGACTGGTTGTTGCCAAACAGCCACACTGTGGGACTCTTCTTAACCTAAATTTTAA
TTTATTTATACTATTTAGTTTTTGTAAATTTATTTTCGATTTACAGTGIGTTTGTGATTGTTTGCTCTGAGAGTT
CCCCTGTCCCTCCCCCTCCCTCACACCGCGTCTGGTGACAACCGAGTGGCTGTCATCAGCCTGTGTAGGCAGT
CATGGCACCAAAGCCACCAGACTGACAAATGTGTATCGGATGCTTTTGTTTCAGGGCTGTGATCGGCCTGGGGAAA
TAATAAAGCACGCTCTTTTAAAAGGT

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FIGURE 431

MQVSTAALAVLLCTMALCNQFSASLAADTPTACCFSYTSRQIPQNFADYFETSSQCSKPGVIFLTKRSRQVCAD
PSEEWVQKYVSDLELSA

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FIGURE 432

GCTACACTAGAGCAGAGTACGAGTCTGAGGCGGAGGGAGTAATGGCAGGACAAGCGTTTAGAAAGTTTCTTCCAC
TCTTTGACCGAGTATTGGTTGAAAGGAGTGCTGCTGAAACTGTAACCAAAGGAGGCATTATGCTTCCAGAAAAAT
CTCAAGGAAAAAGTATTGCAAGCAACAGTAGTCGCTGTTGGATCGGGTTCTAAAGGAAAGGGTGGAGAGATTCAAC
CAGTTAGCGTGAAAGTTGGAGATAAAAGTTCTTCTCCAGAATATGGAGGCACCAAAGTAGTTCTAGATGACAAGG
ATTATTTCTTATTAGAGATGGTGACATTCTTGAAAGTACGTAGACTGAAATAAGTCACTATTGAAATGGCATC
AACATGATGCTGCCCATTCCACTGAAGTTCTGAAATCTTTCGTCATGTAAATAATTTCCATATTTCTCTTTTATA
ATAAACTAATGATAACTAATGACATCCAGTGTCTCCAAAATTGTTTCCTTGACTGATATAAACACTTCCAAATA
AAAATATGTAAAT

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FIGURE 433

MAGQAFRKFLPLFDRVLVERSAAETVTKGGIMLPEKSQGKVLQATVWAVGSGSKGKGGEIQPVSVKVGDKVLLPE
YGGTKVVLDDKDYFLFRDGDILGKYVD

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FIGURE 434

CTCCGCTGCTGTCGCCAGGAGTCACTTCACGAGAAGCCAGGTCACAACCGTCGGCCCTTGCTCTGGAAGTAAAA
GTGGATCCTGCCACGTTCCGGAGCTCCCTGGCGCCTCGCCCGGCTGGAGCTAGAGAACTCGTCCTGTGGCGGCCCC
CGGCGTGGGGCGGGACAGCGGCCCTGGAGGGGGCAGTCCCGGGAGAACCTGCGGCGGCCGGAGCGGTAAAAAT
AAGTGAATAAAGAAGCAGACCTGGGAATCACCTAACATGTCGAGGAGGAGATTGATTGCCGAAGTATTTAGGC
CTACTAACTACAACCTCCTCAAATTTCCAATAAAAAATGGAAAACTTTAATAATTTCTATATACTTACATCTAAAGAG
CTAGGGAGAGGAAAAATTTGCTGTGGTTAGACAATGTATATCAAAATCTACTGGCCAAGAATATGCTGCAAAATTT
CTAAAAAAGAGAAGAAGAGGACAGGATTGTGCGGCAGAAATTTTACACGAGATTGCTGTGCTTGAATTGGCAAAG
TCTTGTCCCCGTGTTATTAATCTTCATGAGGTCTATGAAAATACAAGTGAAATCATTGATATTGGAATATGCT
GCAGGTGGAGAAATTTTCAGCCTGTGTTTACCTGAGTTGGCTGAAATGGTTTCTGAAAATGATGTTATCAGACTC
ATTAAACAAATACTTGAAGGAGTTTATTATCTACATCAGAATAACATTGTACACCTTGATTTAAAGCCACAGAAT
ATATTACTGAGCAGCATATACCCTCTCGGGGACATTAAATAGTAGATTTTGGAAATGTCTCGAAAAATAGGGCAT
GCGTGTGAACCTTCGGGAAATCATGGGAACACCAGAATATTTAGCTCCAGAAATCCTGAACTATGATCCCATTACC
ACAGCAACAGATATGTGGAATATTGGTATAATAGCATATATGTTGTTAACTCACACATCACCATTTGTGGGAGAA
GATAATCAAGAAACATACCTCAATATTTCTCAAGTTAATGTAGATTATTCGGAAGAACTTTTTATCAGTTTCA
CAGCTGGCCACAGACTTTATTCAGAGCCTTTTAGTAAAAAATCCAGAGAAAAGACCAACAGCAGAGATATGCCTT
TCTCATTCTTGGCTACAGCAGTGGGACTTTGAAAACCTGTTTACCCTGAAGAACTTCCAGTTCTCTCAAAT
CAGGATCATTCTGTAAGGTCTCTGAAGACAAGACTTCTAAATCCTCCTGTAATGGAACCTGTGGTGATAGAGAA
GACAAAGAGAATATCCCAGAGGATAGCAGCATGGTTTCCAAAAGATTTGTTTTGATGACTCATTACCCAATCCC
CATGAACCTGTTTCAGATTTGCTCTGTAGCACTTTTTCTTTGACTCATTGTTGGACTGAATTTGAAATTTTATAT
CCACTCCAGTGAGATTATGATTTGTAGCTTCATATATGACATGTTTATATTGTAAATGCACTTTCCATGGAATA
ATTTAGGGAAGTGTTTTAAATGTTAAATTACTAGTTGCTAGCATGTTATGATTTTCATATCCTGAGATAGCTCTGCA
GATAAGAAAATATTTAAATATATGACAAAAAGTAAAATTGTACATGTGAAAG

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FIGURE 435

MSRRRFDCRSISGLLTTPQIPKMFNNFYILTSKELGRGKFAVVRQCISKSTGQEYAAKFLKKRRRGQDCRA
EILHEIAVLELAKSCPRVINLHEVYENTSEIILILEYAAGGEIFSLCLPELAEMVSENDVIRLIKQILEGVYYLH
QNNIVHLDLKPQNILLSSYPLGDIKIVDFGMSRKIGHACELREIMGTPEYLAPEILNYDPITTATDMWNIGIIA
YMLLTHTSPFVGEDNQETYLNISQVNVYSEETFSSVSQLATDFIQSLLVKNPEKRPTAEICLSHSLQWDFEN
LFHPEETSSSSQTQDHSVRSSDKTSKSSCNGTCGDREDKENIPEDSSMVSKRFRFDDSLPNPHELVSDLLC

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FIGURE 436

TAACTGAGCGAGGAGCAATTGATTAATAGCTCGGCGAGGGGACTCACTGACTGTTATAATAACACTACACCAGCA
ACTCCTGGCTTCCCAGCAGCCGGAACACAGACAGGAGAGAGTCAGTGGCAAATAGACATTTTTCTTATTTCTTAA
AAAACAGCAACTTGTTTGCTACTTTTATTTCTGTTGATTTTTTTTTTCTTGGTGTGTGTGGTGGTTGTTTTAAGT
GTGGAGGGGAAAAGGAGATACCATCCCAGGCTCAGTCCAACCCCTCTCCAAAACGGCTTTTCTGACACTCCAGGT
AGCGAGGGAGTTGGGTCTCCAGGTTGTGCGAGGAGCAAATGATGACCGCCAAGGCCGTAGACAAAATCCCAGTAA
CTCTCAGTGGTTTTGTGCACCAGCTGTCTGACAACATCTACCCGGTGGAGGACCTCGCCGCCACGTCGGTGACCA
TCTTTCCCAATGCCGAAGTGGGAGGCCCTTTGACCAGATGAACGGAGTGGCCGGAGATGGCATGATCAACATTG
ACATGACTGGAGAGAAGAGGTCGTTGGATCTCCCATATCCCAGCAGCTTTGCTCCCGTCTCTGCACCTAGAAACC
AGACCTTCACTTACATGGGCAAGTTCTCCATTGACCCTCAGTACCCTGGTGCCAGCTGCTACCCAGAAGGCATAA
TCAATATTGTGAGTGCAGGCATCTTGCAAGGGGTCACTTCCCCAGCTTCAACCACAGCCTCATCCAGCGTCACCT
CTGCCTCCCCCAACCCACTGGCCACAGGACCCCTGGGTGTGTGCACCATGTCCCAGACCCAGCCTGACCTGGACC
ACCTGTACTCTCCGCCACCGCTCTCTCTCTTATTCTGGCTGTGCAGGAGACCTCTACCAGGACCCCTTCTGCGT
TCTGTGACGAGCCACCACCTCCACCTCTTCTCTCTGGCCTACCCACCACCTCCTTCTATCCATCCCCAAGC
CAGCCACGGACCCAGGTCTCTTCCCAATGATCCCAGACTATCCTGGATTCTTCCATCTCAGTGCCAGAGAGACC
TACATGGTACAGCTGGCCAGACCGTAAGCCCTTTCCCTGCCCAGTGGACACCCCTGCGGGTGCCCCCTCCACTCA
CTCCACTCTCTACAATCCGTAACCTTTACCCTGGGGGGCCCCAGTGCTGGGGTGACCGGACCAGGGGCCAGTGGAG
GCAGCGAGGGGACCCCGCTGCCTGGTAGCAGCTCAGCAGCAGCAGCAGCCGCCGCCGCCGCCCTATAACCCAC
ACCACCTGCCACTGCGGCCATTCTGAGGCCTCGCAAGTACCCCAACAGACCCAGCAAGACGCCGGTGCACGAGA
GGCCCTACCCGTGCCAGCAGAAGGCTGCGACCGGCGGTTCTCCCGCTCTGACGAGCTGACACGGCACATCCGAA
TCCACACTGGGCATAAGCCCTTCCAGTGTGCGATCTGCATGCGCAACTTCAGCCGCAGTGACCACCTCACCACCC
ATATCCGCACCCACACCGGTGAGAAGCCCTTCGCCTGTGACTACTGTGGCCGAAAGTTTGCCCGGAGTGATGAGA
GGAAGCGCCACACCAAGATCCACCTGAGACAGAAAGAGCGGAAAAGCAGTGCCCCCTCTGCATCGGTGCCAGCCC
CCTCTACAGCTCTCTGCTCTGGGGGCGTGACGCTGGGGGTACCCTGTGCAGCAGTAACAGCAGCAGTCTTGCGG
GAGGGCCGCTCGCCCTTGCTCCTCTCGGACCCGGACACCTTGAGATGAGACTCAGGCTGATACACCAGCTCCCA
AAGGTCCCGGAGGCCCTTTGTCCACTGGAGCTGCACAACAACTACCACCTTTCTGTCCCTCTCTCCCTTT
GTTGGGCAAAGGGCTTTGGTGGAGCTAGCACTGCCCCCTTCCACCTAGAAGCAGGTTCTTCTTAAACTTAGCC
CATTCTAGTCTCTCTTAGGTGAGTTGACTATCAACCCAAGGCAAAGGGGAGGCTCAGAAGGAGGTGGTGTGGGGA
TCCCTGGCCAAGAGGGCTGAGGTCTGACCCTGCTTTAAAGGGTTGTTGACTAGGTTTTGCTACCCCACTTCCC
CTATTTTGACCCATCACAGTTTTTGACCCTGGATGTCAGAGTTGATCTAAGACGTTTTCTACAATAGGTTGGG
AGATGCTGATCCCTTCAAGTGGGACAGCAAAAAGACAAGCAAACTGATGTGCACTTTATGGCTTGGGACTGAT
TTGGGGGACATTGTACAGTGAAGTATAGCCTTTATGCCCACTCTGTGGCCCTAAAATGGTGAATCAGAGC
ATATCTAGTTGTCTCAACCTTGAAGCAATATGTATTATATACTCAGAGAACAGAAGTGAATGTGATGGGAGGA
ACGTAGCAATATCTGCTCCTTTTCGAGTTGTTGAGAAATGTAGGCTATTTTTTCAGTGTATATCCACTCAGATT
TTGTGTATTTTGTATGTACCCACACTGTTCTCTAAATCTGAATCTTTGGGAAAAATGTAAAGCATTATGATC
TCAGAGGTTAACTTATTTAAGGGGGATGTACATATTCTCTGAACTAGGATGCATGCAATTGTGTTGGAAGTGC
CTTGGTTCGCTTGTGTGATGTAGACAAATGTTACAAGGCTGCATGTAAATGGGTTCCTTATTATGGAGAAAAA
ATCACTCCCTGAGTTTAGTATGGCTGTATATTTATGCCATTATAATTTGGAATTTTTTTTAGAAAGTATATTTT
TGTATGCTTTGTTTTGTGACTTAAAGTGTTACCTTTGTAGTCAAATTCAGATAAGAATGTACATAATGTTACC
GGAGCTGATTTGTTTGGTCATTAGCTCTTAATAGTTGTGAAAAATAAATCTATTCTAACGCAAAACCACTAACT
GAAGTTCAGATATAATGGATGGTTTGTGACTATAGTGTAAATAAATACTTTTCAACAAT

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FIGURE 437

MMTAKAVDKIPVTLSGFVHQLSDNIYPVEDLAATSVTIFPNAELGGPFQDMNGVAGDGMINIDMTGEKRSLDLPY
PSSFAPVSAPRNQTFITYMGKFSIDPQYPGASCYPEGIINIVSAGILQGVTSASTTASSSVTSASPNPLATGPLG
VCTMSQTQPDLDHLYSPPPPPPPYSGCAGDLYQDPSAFLSAATTSTSSSLAYPPPPSYSPKPDTPGLFPMIPD
YPGFFPSQCQRDLHGTTAGPDRKPFPCPLDTRLVPPPLTPLSTIRNFTLGGPSAGVTGPGASGGSEGPRLPGSSSA
AAAAAAAAAYNPHHLPLRPILRPRKYPNRPSKTPVHERPYPCPAEGCDRRFSRSDELTRHIRIHTGHKPFQCRIC
MRNFSRSDHLTTTHIRHTGEKPFACDYCGRKFARSDERKRHTKIHRLRQKERKSSAPSASVPAPSTASCSGGVQPG
GTLCSSNSSSLGGGPLAPCSSRTRTP

FIGURE 438A

ATGAACCTCTGAAAACTGCCGCATCTGAGGTTTCTCTCCAAGGCCCTCTGAAGTGCAGCCCATAATGAAGGTCTT
GGCGGCAGGAGTTGTGCCCTGCTGTTGGTTCTGCACTGGAAACATGGGGCGGGGAGCCCTCCCCATCACCCC
TGTC AACGCCACCTGTGCCATACGCCACCCATGTCAACAACCTCATGAACCAGATCAGGAGCCAACTGGCACA
GCTCAATGGCAGTGCCAATGCCCTCTTTATTCTCTATTACACAGCCCAGGGGGAGCCGTTCCCCAACAACTGGA
CAAGCTATGTGGCCCCAACGTGACGGACTTCCCGCCCTTCCACGCCAACGGCACGGAGAAGGCCAAGCTGGTGGA
GCTGTACCGCATAGTCGTGTACCTTGGCACCTCCCTGGGCAACATCACCCGGGACCAGAAGATCCTCAACCCAG
TGCCCTCAGCCTCCACAGCAAGCTCAACGCCACCGCCGACATCCTGCGAGGCCTCCTTAGCAACGTGCTGTGCCG
CCTGTGCAGCAAGTACCACGTGGGCCATGTGGACGTGACCTACGGCCCTGACACCTCGGGTAAGGATGTCTTCCA
GAAGAAGAAGCTGGGCTGTCAACTCCTGGGGAAAGTATAAGCAGATCATCGCCGTGTTGGGCCAGGCCTTCTAGCA
GGAGGTCTTGAAGTGTGCTGTGAACCGAGGGATCTCAGGAGTTGGGTCCAGATGTGGGGGCCTGTCCAAGGGTGG
CTGGGGGCCCAGGGCATCGCTAAACCCAAATGGGGGCTGTGGCAGACCCCGAGGGTGCCTGGCCAGTCCACTCCA
CTCTGGGCTGGGCTGTGATGAAGCTGAGCAGAGTGGAACCTTCCATAGGGAGGGAGCTAGAAGAAGGTGCCCTT
CCTCTGGGAGATTGTGGACTGGGGAGCGTGGGCTGGACTTCTGCCTCTACTTGTCCCTTTGGCCCTTGCTCACT
TTGTGCAGTGAACAACTACACAAGTCATCTACAAGAGCCCTGACCACAGGGTGAGACAGCAGGGCCCCAGGGGAG
TGGACCAGCCCCCAGCAAATTATCACCATCTGTGCCCTTGTGTCCTTAGGTTGGGACTTAGGTGGGCCAGAGG
GGCTAGGATCCCAAAGGACTCCTTGTCCCCTAGAAGTTTGATGAGTGGAAGATAGAGAGGGGCCCTCTGGGATGGA
AGGCTGTCTTCTTTTGGAGTGATCAGAGAACTTGGGCATAGGAACAATCTGGCAGAAGTTTCCAGAAGGAGGTC
ACTTGGCATTACGGCTCTTGGGGAGGCAGAGAAGCCACCTTCAGGCCTGGGAAGGAAGACACTGGGAGGAGGAGA
GGCCTGGAAAGCTTTGGTAGGTTCTTCGTTCTTCCCCGTGATCTTCCCTGCAGCCTGGGATGGCCAGGGTCTG
ATGGCTGGACCTGCAGCAGGGGTTTGTGGAGGTGGGTAGGGCAGGGGCAGGTTGCTAAGTCAGGTGCAGAGGTTT
TGAGGGACCCAGGCTCTTCTCTGGGTAAAGGTCTGTAAGAAGGGGCTGGGGTAGCTCAGAGTAGCAGCTCACAT
CTGAGGCCCTGGGAGGTCTTGTGAGGTACACAGAGGTAAGTTGAGGGGGACTGGAGGCCGTCTCTGGTCCCCAGG
GCAAGGGAACAGCAGAACTTAGGGTCAGGGTCTCAGGGAACCCTGAGCTCCAAGCGTGCTGTGCGTCTGACCTGG
CATGATTTCTATTTATTATGATATCCTATTTATATTAACCTATTGGTGCTTTTCAGTGGCCAAGTTAATTCCCCTT
TCCCTGGTCCCTACTCAACAAAATATGATGATGGCTCCCGACACAAGCGCCAGGGCCAGGGCTTAGCAGGGCCCTG
GTCTGGAAGTCGACAATGTTACAAGTGGAATAAGCTTACGGGTGAAGCTCAGAGAAGGGTCGGATCTGAGAGAAT
GGGGAGGCCTGAGTGGGAGTGGGGGGCCTTGCTCCACCCCCATCCCCTACTGTGACTTGCTTTAGCGTGTACGGG
TCCAGGCTGCAGGGGCTGGGCCAATTTGTGGAGAGGCCGGGTGCCCTTCTGTCTTGCTTCCAGGGGGCTGGTTCA
CACTGTTCTTGGGCGCCCCAGCATTGTGTTGTGAGGCGCACTGTTCTTGGCAGATATTGTGCCCCCTGGAGCAGT
GGGCAAGACAGTCTTGTGGCCACCCCTGTCTTGTGTTCTGTGTCCTTCTGAAATAGCGCCCTGGA
ACAACCTTGCCCTGCACCCAGCATGCTCCGACACAGCAGGGAAGCTCCTCCTGTGGCCCGGACACCCATAGACG
GTGCGGGGGGCTGGCTGGGCCAGACCCCAGGAAGGTGGGGTAGACTGGGGGGATCAGCTGCCCATTTGCTCCCAA
GAGGAGGAGAGGGAGGCTGCAGACGCCTGGGACTCAGACCAGGAAGCTGTGGGCCCTCCTGCTCCACCCCCATCC
CACTCCCACCCATGTCTGGGCTCCCAGGCAGGGAACCCGATCTCTTCTTTGTGCTGGGGCCAGGCAGTGGAGA
AACGCCCTCCAGTCTGAGAGCAGGGGAGGGAAGGAGGCAGCAGAGTTGGGGCAGCTGCTCAGAGCAGTGTCTTG
CTTCTTCTCAAACCTGAGCGGGCTGCCGGCCTCCAAGTTTCTCCGACAAGATGATGGTACTAATTATGGTACTT
TTCACTCACTTTGCACCTTTCCCTGTGCTCTCTAAGCACTTTACCTGGATGGCGCGTGGGCAGTGTGCAGGCAG
GTCTGAGGCCTGGGGTTGGGGTGGAGGGTGCGGCCCCGAGTTGTCCATCTGTCCATCCCAACAGCAAGACGAGG
ATGTGGCTGTTGAGATGTGGGCCACACTCACCCCTGTGCCAGGATGCAGGACTGCCTTCTCCTTCTGCTTCATC
CGGCTTAGCTTGGGGCTGGCTGCATTCCCCCAGGATGGGCTTCAGAAAGACAACTTGTCTGGAACACAGAGTT
GCTGATTCCACCCGGGGGGCCCGGCTGACTCGCCCATCACTCATCTCCCTGTGGACTTGGGAGCTCTGTGCCAG
GCCACCTTGCGGGCCCTGGCTCTGAGTCGCTCTCCACCCAGCCTGGACTTGCCCCATGGGACCCATCCTCAGT
GTCCTTCCAGATCCCGTCCGGCAGCTTGGCGTCCACCCCTGCACAGCATCACTGAATCACAGAGCCTTTGCGTGA
AACAGCTCTGCCAGGCCGGGAGCTGGGTTTCTCTTCCCTTTTATCTGCTGGTGTGGACCACACCTGGGCCTGGC
CGGAGGAAGAGAGAGTTTACCAAGAGAGATGTCTCCGGGCCCTTATTTATTATTTAAACATTTTTTTTAAAGCA
CTGCTAGTTTACTTGTCTCTCCTCCCCATCGTCCCCATCGTCTCCTTGTCCCTGACTTGGGGCACTTCCACCCCT
GACCCAGCCAGTCCAGCTCTGCCTTGCCGGCTCTCCAGAGTAGACATAGTGTGTGGGGTTGGAGCTCTGGCACC
GGGGAGGTAGCATTTCCCTGCAGATGGTACAGATGTTCTGCCTTAGAGTCATCTCTAGTTCCCCACCTCAATCC

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FIGURE 438B

CGGCATCCAGCCTTCAGTCCCGCCCACGTGCTAGCTCCGTGGGCCCCACCGTGCGGCCCTTAGAGGTTTCCCTCCTT
CCTTTCCACTGAAAAGCACATGGCCTTGGGTGACAAATTCCTCTTTGATGAATGTACCCTGTGGGGATGTTTCAT
ACTGACAGATTATTTTTATTTATTCAATGTCATATTTAAATATTTATTTTTTATACCAAATGAATCACTTTTTT
TTTAAGAAAAAAAAGAGAAATGAATAAAGAATCTACTCTTCG

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FIGURE 439

MKVLAAGVVPLLLVLHWKHGAGSPLPITPVNATCAIRHPCHNNLMNQIRSQLAQLNGSANALFIIYYTAQGEPPF
NNLDKLCGPNVTDFFPPFHANGTEKAKLVELYRIVVYLGTSLGNITRDQKILNPSALSLHSKLNATADILRGLLSN
VLCRLCSKYHVGHVDVTYGPDTSGKDVFQKKKLGCQLLGKYKQIIAVLAQAF

FIGURE 440A

[illegible]

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FIGURE 440B

AACTCCCTCCCCATTTAGATTATTTATTAACATATTTTAAAAATCAGATGAGTTCTATAAATAATTTAGAGAAG
TGAGAGTATTTATTTTTGGCATGTTTGGCCCACCACACAGACTCTGTGTGTGTATGTGTGTGTTTATATGTGTAT
GTGTGTGACAGGAAAATCTGTAGAGAAGAGGCACATCTATGGCTACTGTTCAAATACATAAAGATAAAATTTATTT
TCACACAGTCCACAAGGGGTATATCTTGTAGTTTTTCAGAAAAGCCTTTGGAAATCTGGATCAGGAAATAGATACC
ATGGTTTGTGCAATTATGTAGTAAAAAAGGCAAAATCTTTTCACCTCTGGCTATTCCTGAGACCCCAGGAAGTCAG
GAAAAGCCTTTTCAGCTCACCCATGGCTGCTGTGACTCCTACCAGGGCTTTCTTGGCTTTGGCGAAGGTCAGTGTA
CAGACATTCCATGGTACCAGAGTGCTCAGAAAGTCAAGATAGGATATGCCTCACCCCTCAGCTACTCCTTGTTTTA
AAGTTCAGCTCTTTGAGTAACTTCTTCAATTTCTTTCAGGACACTTGGGTTGAATTCAGTAAGTTTCCTCTGAAG
CACCTGAAGGGTGCCATCCTTACAGAGCTAAGTGGAGACGTTTCCAGATCAGCCCAAGTTTACTATAGAGACTG
GCCCAGGCACTGAATGTCTAGGACATGCTGTGGATGAAGATAAAGATGGTGGAAATAGGTTTTATCACATCTCTTA
TTTCTCTTTTCCCCTTACTCTCTACCATTTCTTTTATGTGGGGAAACATTTTAAGGTAATAAATAGGTTACTTAC
CATCATATGTTTCATATAGATGAACTAATTTTGGCTTAAGTCAGAACAACCTGGCCCCCAATTGAAGTCATATTT
GTGGGGGGAAATGGCATAACGAATATTATATTATATTGGATATTTATGTTACACAGGAATTTGCTTTACTGCTT
TGTAATAAAAGGGAAAACCTCCGGGTATATGT

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FIGURE 441

MGLPEPGPLRLLALLLLLLLLLLLLLLLRLQHLAAAAADPLLGGQGPKECEKDQFQCRNERCIPSVWRCDEDDDCLDH
SDEDDCPKKTCADSDFTCDNHGCIHERWKCDGEEECPDGSDSEATCTKQVCPAEKLSGPTSHKCVPASWRCDG
EKDCEGGADEAGCATLCAPHEFQCGNRSCLAAVFVCDGDDDCGDGSDERGCADPACGPREFRCGGDGGGACIPER
WVCDRQFDCEDRSDEAAELCGRPGPGATSAPAAACATVSQFACRSGEVHLGWRCDGDRDCKDKSDEADCP LGTCR
GDEFQCGDGTCLVLAIKHCNQEQDCPDGSDGAGCLQGLNECLHNNGGCSHICTDLKIGFECTCPAGFQLLDQKTCG
DIDECKDPDACSQICVNYKGYFKCECYPGYEMDLLTKNCKAAGGKSPSLIFTNRYEVRRIDLVKRNY SRLIPMLK
NVVALDVEVATNRIYWCDLSYRKIYSAYMDKASDPKEQEV LIDEQLHSPEGLAVDWVHKHIYWTDSGNKTISVAT
VDGGRRTLF SRNLSEPRAI AVDPLRGFMYWSDWGDQAKIEKSLNGVDRQTLVSDNIEWPNGITLDLLSQRLYW
VDSKLHQLSSIDFSGGNRKTLISSTDFLSHPFGIAVFEDKVFWTDLNEAIF SANRLNGLEISILAENLNNPHDI
VIFHELKQPRAPDACELSVQPNGGCEYLCLPAPQISSHSPKYTCACPD TMWLGPDMKRCYRAPQSTSTTTLASTM
TRTVPATTRAPGTTVHRSTYQNHSTETPSLTAAVPSSVSVPRAPSPSTLSPATSNHSQHYANEDSKMGSTVTA
AVIGIIVPIVVIALLCMSGYLIWRNWK RKNTKSMNFDNPVYRKTTEEEDEDELHIGRTAQIGHVYPAAISSFDRP
LWAEPCLGETREPDPAPALKELFVLPGEPRSQLHQLPKNPLSELPVVKSKRVALSLEDDGLP

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FIGURE 442

TAGGATGGAAAGGCAGATGTAAAGTCCCTCATGGCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCA
GTCAATAGCCGACCCTTCAGAGTCACAGGGCCAAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAAC
AACCAAGGAAATGCCAGCCCTCCTGCAGGACCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCA
GTCAAACCTTCTTCTGAGGAAAAGCCTGACAAGGAACCCAAGCCCCGTTTCTAAAGCCCCTGAGAGCAGGCCAA
AGATTGGAACACCAGCCAGCTTGACCACCAGAGACCCGAGGCGAAAGTGGGATTTCTGAAACCTGTAGGCCCC
AAGCCCATCAACTTGCCCAAAGAAGATTCCAAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCAC
AGTGTAACCAAGACCATGACTTAAAGCCACTAGGCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAA
CAGAAGCAAGCGTTTCCCAAATTGACTGGGGTTAAAGGGAAATTTATGTGAGCATCACAAGATCTTGAACCCAAG
CCCCCTTTCCCAAACCCGCTTTGGCCAGAAGCCGCCCTAAGTACCGAGAACTCCCATGAAGACGAAAGCCCC
ATGAAGAATGTGTCTTCATCAAAAGGGTCCCCAGCTCCCCGAGTCCAGGTCCAAAAGCGGCCCTTTAAACCA
GCAAGGGAAGACTCAGAAAATAAAGACCATGCAGGGGAGATTTCAAGTTTGCCCTTTCTGGAGTGGTTTTGAAA
CCTGCTGCGAGCAGGGGAGGCCTAGGTCTCTCCAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCT
GCTAAGAACACCTTCAGAGCAAAAATAAATCAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGGTTCCCTAAG
GCCCCTTCTAAGCTGACAGTGGGGGGGCCATGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCC
ACCCCGAAACAGAAGCCATTGCCTCCCTTGTTTTACCTTGGGTCCACCTCCACCAAAACCCAACAGACCACCAAT
GTTGACCTGACGAAATTCCACAAAACCTCTTCTGGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAAC
TCCCTGCCACCACCTCCACCATCCCATCCGGCCAGCCAACCACCTTGGCAGCATCTCACCCATCACAACCACCA
GTCCCAAGCCTACCTCCCAGAAACATTAAACCTCCGTTTGACCTAAAAAGCCCTGTCAATGAAGACAATCAAGAT
GGTGTACGCACTCTGATGGTGTGAAATCTAGATGAGGAACAAGACAGTGAAGGAGAAACATATGAAGACATA
GAAGCATCCAAAGAAAGAGAGAAGAAAAGGGAAAAGGAAGAAAAGAGGTTAGAGCTGGAGAAAAAGGAACAG
AAAGAGAAAGAAAAGAAAGAACAAGAAATAAAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTT
GCAAAAGCTTGTTGTGATGTCAAAGGAGGAAAGAATGAAGTGAAGCTTCAAGCAAGGAGAGCAAAATGAAATCATC
CGCATCACAGACAACCCAGAAGGAAAATGGTTGGGCAGAACAGCAAGGGGTTTATATGGCTATATTAACAAC
GCTGTAGAGATTGACTATGATTCTTTGAAACTGAAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGAT
GACCAAGAAGTATATGATGATGTTGCAGAGCAGGATGATATTAGCAGCCACAGTCAGAGTGGAGTGGAGGGATA
TTCCCTCCACCACCAGATGATGACATTTATGATGGGATTGAAGAGGAAGATGCTGATGATGGTTCCCTGCTCCT
CCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTGGATACCTCTGATTTCCCTGTTTCATCAGCAGAG
ATGAGTCAAGGAACTAATTTTGGAAAAGCTAAGACAGAAGAAAAGGACCTTAAGAAGCTAAAAAGCAGGAAAA
GAAGAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAAATTAGAGTCCTATATTCAACTAAAGTTACAAC
TCCATAACTTCTAAAAAGTGGGGAACCCAGAGATCTACAGGTAAAACCTGGTGAACTCTTAGAAGTTATACAAAC
ACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAATATGGTTATGTCCTTCGGAGTTACCTAGCGGAC
AATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATCTATGACAATGACTAGCACTCAACTTTGGTCATT

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FIGURE 443

MAKYNTGGNPTEDVSVNSRPFRTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEEKPD
KEPKPPFLKPTGAGQRFGTASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNDHDLKP
LGPKSGPTPPTSENEQQAFFPKLTGVKGKFMASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRSGPLKPAREDSSENKDHAGEISSLPFPGVVLKPAASRGGLGLSKNGEEKKEDRKIDAANKTFQSKIN
QEELASGTPPARFPKAPSKLTVGGPWGQSQEKEKGDKN SATPKQKPLPPLFTLGPPPPKPNRPPNVDLTKEFKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEEKKRLELEKKEQKEKEKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFQGEQIEIIRITDNPEGKWLGR TARGSYGYIKTTAVEIDYDSLKLKKDSL GAPSRPIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEDADDGFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKA
KTEEKDLKLLKKQEKEEKDFRKKFKYDGEIRVLYSTKVTT SITSKKWGTRDLQVKPGESLEVIQTDDTKVLCRN
EEGKYGYVLR SYLADNDGEIYDDIADGCIYDND

FIGURE 444A

[illegible]

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FIGURE 445

GSAPGREKEVGGRGAQPAGPEGMFEDKPHAEGAAVVAAAGEALQALCQELNLDEGSAAEALDDFTAIRGNYSLEG
EVTHWLACSLYVACRKSIIPTVGKGIMEGNCVSLTRILRSAKLSLIQFFSKMKKWMDSNLPOEFREIERLERN
FEVSTVIFKKYEPIFLDIFQNPYEEPPKLPRSRKQRRIPCSVKDLFNFCWTLFVYTKGNFRMIGDDLVSNSYHLLL
CCLDLIFANAIMCPNRQDLLNIHHLKVYHLIFILLTLRLLKSHPGIIAVLCELHDGLLVEAKGIKEHYFKPYISK
LFDRKILKGECLLDLSSFTDNSKAVNKEYEEYVLTVVILMRGSFGSRRRRGNGTPRKFTTRDTPLGKLTAQANVEY
NLQQHFEKKRSFAPSTPLTGRRYLREKEAVITPVASATQSVSRQLSIVAGLKNAPSDQLINIFESCVRNPNVENIM
KILKGIGETFCQHYTQSTDEQPGSHIDFAVNRLKLAELIYYKILETVMVQETRRLHGMDMSVLEQDIFHRSLMA
CCLEIVLFAYSSPRTFPWIIIEVLNLQPFYFYKVIEVVIRSEEGLSRDMVKHLNSIEEQILES LAWSHDSALWEAL
QVSANKVPTCEEVIFPNNFETGNGGNVQGHLPMPMSPLMHPRVKEVRTDSGSLRRDMQPLSPISVHERYSSPTA
GSAKRRLFGEPPKEMLMDKIITEGTLKLIAPSSSITAENVSI L PGQTLLTMATAPVTGTTGHKVTIPLHGVAND
AGEITLIPLSMNTNQESKVKSPVSLTAHSLIGASPKQTNLTKAQEVHSTGINRPKRTGSLALFYRKVYHLASVRL
RDLCLKLDVSNELRRKIWTCFEFTLVHCPDLMKDRHLDQLLLCAFYIMAKVTKEERTFQEIMKSYRNQFPQANSHV
YRSVLLKSIPREVVAYNKNINDDFEMIDCDLEDATKTPDCSSGPVKEERGDLIKFYNTIYVGRVKS FALKYDLAN
QDHMMDAPPLSPFPHIKQQPGSPRRISQQHSIYISPHKNGSGLTPRSALLYKFNGSPSKSLKDINNMI RQGEQRT
KKRVIAIDSDAESPAKRVQCENDDVLLKRLQDVVSERANH

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FIGURE 446

GGGGCCAGTCGTTCCGCCGAAAGCATTGTCTCCACCTCATCATAACAACAATTAATTTCTCTGGGGCCTGAG
GAGGGCAGAATTTCAACCTTCGGTGTGCTTGGGAGTGGCGATTGTGATTTACACGACAAAATGCCGAGGTGCTCG
GTGGAGTCATGGCAGTGCCCTTTGTGGAAGACTGGGACTTGGTGCAAACCCTGGGAGAAGGTGCCTATGGAGAAG
TTCAACTTGCTGTGAATAGAGTAAGTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGACT
GTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAATCATGAAAATGTAGTAAAATTCTATGGTC
ACAGGAGAGAAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTGACAGAATAGAGC
CAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTTCCATCAACTCATGGCAGGGGTGGTTTATCTGCATG
GTATTGGAATAACTCACAGGGATATTAAACCAGAAAATCTTCTGTTGGATGAAAGGGATAACCTCAAAATCTCAG
ACTTTGGCTTGGCAACAGTATTTCCGTATAATAATCGTGAGCGTTTGTGAACAAGATGTGTGGTACTTTACCAT
ATGTTGCTCCAGAATCTTGAAGAGAAGAGAAATTCATGCAGAACCAAGTTGATGTTTGGTCCTGTGGAATAGTAC
TTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAACCCAGTGACAGCTGTCAGGAGTATTCTGACTGGAAAG
AAAAAAAAACATAACCTCAACCTTGGAAAAAATCGATTCTGCTCCTCTAGCTCTGCTGCATAAAATCTTAGTTG
AGAATCCATCAGCAAGAATTACCATTCCAGACATCAAAAAAGATAGATGGTACAACAAACCCCTCAAGAAAGGGG
CAAAAAGGCCCCGAGTCACTTCAGGTGGTGTGTCAGAGTCTCCAGTGGATTTTCTAAGCACATTCAATCCAATT
TGGACTTCTCTCCAGTAAACAGTGCTTCTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCA
CAGGTCTTTCTTATGGGATACCAGCCCCTCATACATTGATAAATGGTACAAGGGATCAGCTTTTCCCAGCCCA
CATGTCCTGATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCCAGGATCCTCACAGAACCCCTGGCAGCGGT
TGGTCAAAAGAATGACACGATTCTTTACCAAATTGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTTGTG
AGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACCTGATAGGAGAAACAATA
AACTCATTTTCAAAGTGAATTTGTTAGAAATGGATGATAAAATATTGGTTGACTTCCGGCTTTCTAAGGGTGATG
GATTGGAGTTCAAGAGACACTTCCTGAAGATTAAAGGGAAGCTGATTGATATTGTGAGCAGCCAGAAGGTTTGGC
TTCCTGCCACATGATCCGACCATCGGCTCTGGGGAATCCTGGTGAATATAGTGCTGCTATGTTGACATTATTCTT
CCTAGAGAAGATTATCCTGTCTGCAAACTGCAAATAGTAGTTCTTGAAGTGTTCACTTCCCTGTTTATCCAAAC
ATCTTCCAATTTATTTTGTGTTGTTCCGCATACAAATAATACCTATATCTTAATTGTAAGCAAACTTTGGGGAAA
GGATGAATAGAATTCATTTGATTATTTCTTCATGTGTGTTTAGTATCTGAATTTGAACTCATCTGGTGGAACC
AAGTTTCAGGGGACATGAGTTTTCCAGCTTTTATACACACGTATCTCATTTTTATCAAAACATTTGTTTAATTC
AAAAAGTACATATTTCTTCATGTTGATTTAATTCTAAGATGAACCAATAAAGACATAATTCTTGCAAAAAAAA
AAAAAAAAAAAAAAAAAA

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FIGURE 447

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVALVKIVDMKRAVDCPENIKKEICINKMLNHENVVKFYGHRR
EGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRFFHQLMAGVVYLHGIGITHRDIKPENLLLDERDNLKISDFG
LATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSDWKEKK
TYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDF
SPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVOGISFSQPTCPDHMLLNSQLLGTGSSQNPWQRLVK
RMTRFFTKLDADKSYQCLKETCEKLGQWKKSCMNQVTISTDRRNNKLIFKVNLLMDDKILVDFRLSKGDGLE
FKRHFLKIKGKLIDIVSSQKVWLPAT

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FIGURE 448

GGGGCCAGTCGTTTCGCCGGAAGCATTGTCTCCACCTCATCATAACAACAATTAATTTCTCTGGGGCCTGAG
GAGGGCAGAATTTCAACCTTCGGTGTGCTTGGGAGTGGCGATTGTGATTTACACGACAAAATGCCGAGGTGCTCG
GTGGAGTCATGGCAGTGCCCTTTGTGGAAGACTGGGACTTGGTGCAAACCCTGGGAGAAGGTGCCTATGGAGAAG
TTCAACTTGCTGTGAATAGAGTAACTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGACT
GTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAATCATGAAAATGTAGTAAAATTTCTATGGTC
ACAGGAGAGAAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTGACAGAATAGAGC
CAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTTCCATCAACTCATGGCAGGGGTGGTTTATCTGCATG
GTATTGGAATAACTCACAGGGATATTAACCAGAAAATCTTCTGTTGGATGAAAGGGATAACCTCAAAATCTCAG
ACTTTGGCTTGGCAACAGTATTTCCGTATAATAATCGTGAGCGTTTGTGGAACAAGATGTGTGGTACTTTACCAT
ATGTTGCTCCAGAATTTCTGAAGAGAAGAGAATTTTCATGCAGAACCAGTTGATGTTTGGTCCTGTGGAATAGTAC
TTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAACCCAGTGACAGCTGTCAGGAGTATTCTGACTGGAAAG
AAAAAAAAACATACCTCAACCTTGGAAAAAATCGATTCTGCTCCTCTAGCTCTGCTGCATAAAAATCTTAGTTG
AGAATCCATCAGCAAGAATTACCATTCAGACATCAAAAAAGATAGATGGTACAACAAACCCCTCAAGAAAGGGG
CAAAAAGGCCCCGAGTCACCTTCAGGTGGTGTGTGAGAGTCTCCAGTGGATTTTCTAAGCACATTCAATCCAATT
TGGACTTCTCTCCAGTAAACAGTGCTTCTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCA
CAGGTCTTTTCTTATGGGATACCAGCCCTCATAACATTGATAAATTGGTACAAGGGATCAGCTTTTCCAGCCCA
CATGTCCTGATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCAGGATCCTCACAGAACCCCTGGCAGCGGT
TGGTCAAAAGAATGACACGATTCTTTACCAAATTGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTTGTG
AGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACCTGATAGGAGAAACAATA
AACTCATTTTCAAAGTGAATTTGTTAGAAATGGATGATAAAATATTGGTTGACTTCCGGCTTTCTAAGGGTGATG
GATTGGAGTTCAAGAGACACTTCTGAAGATTAAAGGGAAGCTGATTGATATTGTGAGCAGCCAGAAGGTTTGGC
TTCTGCCACATGATCGGACCATCGGCTCTGGGGAATCCTGGTGAATATAGTGCTGCTATGTTGACATTATTCTT
CCTAGAGAAGATTATCCTGTCTGCAAACTGCAAAATAGTAGTTCTGGAAGTGTTCACTTCCCTGTTTATCCAAC
ATCTTCCAATTTATTTTGTGTTGTTTCGGCATACAAATAATACCTATATCTTAATTGTAAGCAAACTTTGGGGAAA
GGATGAATAGAATTCATTTGATTATTTCTTCATGTGTGTTTAGTATCTGAATTGAACTCATCTGGTGGAACC
AAGTTTCAGGGGACATGAGTTTCCAGCTTTTATACACACGTATCTCATTTTATCAAAACATTTGTTTAATTC
AAAAAGTACATATTTCTTCCATGTTGATTTAATTCTAAGATGAACCAATAAAGACATAATTCTTGCAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 449

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVAVKIVDMKRAVDCPENIKKEICINKMLNHENVVKFYGHRR
EGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRRFFHQLMAGVVYLHGIGITHRDIKPENLLDERDNLKISDFG
LATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSDWKEKK
TYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDF
SPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCPDHMLLNSQLLGTGSSQNPWQRLVK
RMTRFFTKLDADKSYQCLKETCEKLGQWKKSCMNQVTISTDRRNNKLIFKVNLEMDDKILVDFRLSKGDGLE
FKRHFLKIKGKLIDIVSSQKVWLPAT

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FIGURE 450

TTTAAGGCGCCGGGTTTCCGGGGCTCCTGGCCCCGCTTATTCCGCGGGGGTTCGGCGGGGTTCGGCCTGGGCGCCCCG
CGCCGCCGCTGCGCTTTGTCCGCTGGGCACACTGCTTCTGGGAGGGGGCGGCAGACATGGTGGCGGCCGCCGCC
CCTCCTCGGCCCTAGC**ATGCC**CGCGGCCGCTCGCGGCTACCCGGCTTGCCGGTCCCGAGCGGCAGCCCCGGGGTG
GCGATGGGGTTCGCGCCGAGGCAGCGGAGGTTCTGCGGGCGACTGGAGGTTGGCAGTGGGCGGGAGAAAGAGGAAG
GCAGGCGCGGCTGGGCCTCGGCCTCTGGCGCCGCGGTACCCTTTGTCTCGGCAGCCTGACGGCCCCGCCGGGCTC
TCCGGAGAGGGGAACGGGCGGCGAGGGTGGCGGGTCTGGGCGCCCTGTGCTGCGGGGCCGAGAGGCGCTCGGGT
CGCGGCGGGACCGGCCGACCAGACAGGGTTAATGGAAGAGCCTGGCCAGTCCCGCGGGGGCCCCCGCAGCGAC
AGCCTTGGCCGCGGGGACTGGAGTCCTGAGGGGGAGAAGCCTGCCGTTCT**TGA**AGGCTCGGGACTTCTGCCCCAAA
GACTTCGCCGCCGAGAACTGCGGGTGCACTGCCTCAGGGAAGAAGTTGAGAAATTTGCCAGGTCATCTCTGCCAG
GGCACAGTTCATCACTGTGTGTTTTAGTGTGTTTCGGTGAAGCTCTCCAAGTGTGTTGAATCAGCGTGCCTAGCCT
CAAGGGTGCAATCGTGAAACTGAAACCAAAGGAATGATACAGGCCTGCTTTGTGTGTGTCTTCCCACTTTAAGCT
TGTTTTCAGTACAAATACTCTTGCTTTAAACCTGATTGGACTGTGGCGAGCGGACATCTGTTCAAAGGAGGGGCC
GAGACCACAGTACTTCTGAAGGGGGCTTGATAATGTGGAAACATTTTAAGTTTTCTCTCCGGAAGTTTTGCTCT
CTCAATTCAGGCAAGTTACTGAAGTACGTTTTTTATCTAGAAAAAGGTTTGATGTAGTCTGTAAATGGTCCCTGT
AAAGTACATTGCCATCTCAGAATTAAGATCCACTCTCATTTATTATGCAGAAGTTAGTGGTCATTCTTTCCCTG
TAGATAGTTTATCTCATGTAAAGACCCACCCAGCTTGGTTTAAATTTTTTCTCACTGACGTATAACCATCAGCT
TTGATACTTCCATTTTCAGGCTCAGACTTTGAATTTAAGGAACTAAAGATGACTTTATTTTCTTTCTCTTGGT
TTTTTTTCCAAAAACAAAAATAAATCCATTACATGTTAACATAGATGATAAGAGTGACATCTTGCAATTTTGC
AAATCTTTTAAATGCCTGGTTTAATAGAAGATTCTCAGATCTACGTCAGACTGTTGTGGTTAGCACACCATGTAA
CCTCTGGAACACTCCACTGTACACTCATACTTTTTT

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FIGURE 451

MPRPFRGYFACRSRAAAPGWRWGRAEAAEVLRAITGGWQWAGERGRQARLGLGLWRRGTLCLGSLTAPPGSPERGT
GGEGGGSWAPCAAGPRGARVAAGPAGPDRVNGRAWFVPRGAPAATALAAGTGVLGRSLPF

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FIGURE 452

ATCCTGTTGTGCCTATCACCTGTTGAAGTTGCCAGTCTTAAGGAAGGGATCAATTTCTTTTCGCAATAAGAGCACT
GGCAAAGACTACGTCTTGTAACAAGAATAAGAGCCGACTGAGGGCATGCAAGAATATGTGCAAGCACCAAGGAGGC
CTGTTTCATAAAAGATATCGAGGATTTAGCCGGAAGTTGTTGAAATGGATGAAAACAACGGACTTTTGCTTTTAGA
ACTGAATCCTCCTAACCCTTGGGACTTACAGCCCAGATCTCCTGAAGAGTTGGCTTTTGGAGAAGTACAGATAAC
ATATCTCACTCATGCCTGCATGGACCTCAAGTTAGGAGACAAGAGAATGGTGTGTTGACCCTTGGTTAATCGGTCC
TGCTTTTGGCCGTGGATGGTGGTTGCTCCATGAGCCTCCATCTGATTGGCTGGAGAGGCTGTGCCAGGCAGACCT
CGTTTACATCAGTCATCTGCACTCAGACCACCTGAGTTACCCACACTGAAAAAGCTTGCTGGGAGAAGACCAGA
TATCCCATTATGTTGGAAACACAGAAAGGCCTGTATTTTGGAAATCTGAATCAGAGCGGTGTCCAGTTGACTAA
TATCAATGTCGTGCCATTTGGAATATGGCAGCAGGTGGACAAAAATCTTCGATTTCATGATCTTGATGGATGGTGT
TCATCCTGAGATGGACACTTGCATTATTGTGGAGTACAAAGTTCATAAAATACTCAATACAGTAGACTGCACCAG
ACCCAATGGGGGAAGGCTGCCTATGAAGGTTGCTCTAATGATGAGTGATTTTGCTGGAGGAGCATCAGGCTTTCC
AATGACTTTTCAGTGGTGGAAATTTACGGAGGAATGGAAAGCCCAATTCATTAAACAGAAAGGAAGAAGCTCCT
GAACTACAAGGCTTGGCTGGTGAAGAACCTGCAACCCCGAATTTATTGTCCCTTTGCTGGGTATTTTGTGGAATC
TCACCCATCAGACAAGTACATCAAGGAAACAAACACCAAAAAATGACCCAAATGAACTCAACAATCTTATCAAGAA
AACTCTGATGTGATAACATGGACCCCTCGACCGGGAGCCACCCTTGATCTGGGAAGAATGCTGAAGGATCCAAC
AGACAGCAAGGGCATCATAGAGCCTCCAGAGGGGACAAAAATTTACAAGGATTCTTGGGATTTTGAACCTTATTT
GGAAATCTTGAATGCTGCTCTAGGAGATGAAATATTTCTTCACTCATCCTGGATAAAAGAATACTTCACTTGGGC
TGGATTTAAAGATTACAACCTTGTGGTCAGGATGATTGAGACAGATGAGGACTTCAATCCTTTTCTGGAGGATA
TGACTATTTGGTTGACTTTTTAGATTTATCCTTCCCAAAAGAAAGACCACAACGAGAACATCCCTATGAGGAAAT
CCATAGCCGGGTGGATGTCATCAGACACGTGGTGAAGAATGGTCTACTCTGGGATGAGTTGTATATAGGATTCCA
AACACGGCTCCAGCGGGATCCTGACATATACCATCACCTGTTTTGGAATCATTTTCAAATAAACTCCCCCTCAC
ACCACCCAATGGAAGTCATTCCTGATGTGCTGTGAGCAGAATGGGCCTGCGATTTTGCAAGAATGCAAAACCAC
ATGAAAATTTCAAGAATTCAGTATCTGATGCAAAAATAAAATTTATCATTACATCTTGAACCCAGGAAGCTTAC
AGCAAAGAGACTATGCTTTATGACGTACGCAATAGATAATTCCACGTTGCCTTTGTGATTTGTATATATAGCTTA
CATTTGTGGACCACTACATAGCCAGATTCAAAAAATTTTACTTGTTCATCCACAGTTCTCTACAGAAAAGAAC
AATGAACCCAATAGGAACAAATTCTCTGTGGAAAAACAAAGCATAGCTGTAGTAGATACGAATCCAATCACAGAGG
AAACAGGAAGAGAAAAACATCCAAGACTACAGTGAAAACTGGAAATGGTCTGTTTTCGTGATATTCGTATGATTA
AGATGCAAATTTTTTCTTAGGAAAATGTGATTGTTAACTAGCATTCTGTTTTACATGTTGACATTTCTAACACAC
ACACCACTGATTTGAACTTCAAAATTTATTTTCTGATTATATATGCTAGGTCTGATTCTGAAGATACAAGAATTC
AATGGTGGAAATTTGTCTCCTGAAATT

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FIGURE 453

MDENNGLLLLLELNPPNPWDLQPRSPHEELAFGEVQITYLTHACMDLKLGDKRMVFD PWLIGPAFARGWLLHEPPS
DWLERLCQADLVYISHLHSDHLSYPTLKKLAGRRPDIPYVGNTERP VFWNLNQSGVQLTNINVVPFGIWQQVDK
NLRFMILMDGVHPMDTCIIVEYKGHKILNTVDCTRPNGGRLPMKVALMMSDFAGGASGFPMTFSGGKFTEEWKA
QFIKTERKKLLNYKAWLVKNLQPRIYCPFAGYFVESHPSDKYIKETNTKNDPNELNNLIKKNSDVITWTPRPGAT
LDLGRMLKDPTDSKGIIEPPEGTKIYKDSWDFEPYLEILNAALGDEIFLHSSWIKEYFTWAGFKDYNLVVRMIET
DEDFNPFPGGYDYLVDLFLDLSFPKERPQREHPYEEIHSRVDVIRHVKNGLLWDELYIGFQTRLQRDPDIYHHLF
WNHFQIKLPLTPPNWKSFLMCCEQNGPAILQECKTT

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FIGURE 454

AGCCGGCCGCTAAGAAGCCGAAAGATGTCAGGTCGGGCGCGGCGGCTGAGAAGGCGGACTCCAGACAGCGACCC
CAGATGAAGGTAAATGAATATAAAGAAAATCAAAACATCGCTTATGTGTCTCTGAGACCAGCACAGACTACAGTT
TTAATAAAAACAGCTAAGGTCTATCTTGCCCCCTTTTCACTCAGTAATTACCAGCTAGACCAGCTTATGTGCCCC
AAATCCCTATCAGAAAAGAATTCTAACAATGAAGTGGCGTGTAAGAAGACTAAAATAAAGAAAACCTTGCAGAAGG
ATTATACCTCCAAAGATGAAAAACACATCTTCCAAGGCAGAATCCACGCTGCAAAATTCATCCTCAGCTGTTTCAT
ACTGAAAGTAACAAGCTACAACCCAAGAGAACGGCAGATGCGATGAATCTCAGTGTTGATGTGGAAAGTAGTCAG
GATGGAGACAGTGATGAAGATACCACACCAGCCCTGGATTTTTCGGGATTGTCCACCCTACGAAAGGAAGAGACTG
AAGAACATATCAGAAAACGCAGACTTTTTTGTCTCTCTTCAGTTGTCTGAGTCTGCTGCAAGACTCCGTGAAATG
ATAGAGAAGAGACAGCCTCCTAAATCCAAAAGAAAGAAAGCCTAAGAGAGAAAATGGGATTGGATGTAGAAGGTCA
ATGCGATTACTAAAAGTTGATCCTTCGGGAGTTTCATTACCAGCAGCTCCAACACCGCCGACATTAGTAGCAGAT
GAAACTCCTTTGTTACCTCCTGGGCCTTTAGAAATGACTTCTGAAAAATCAAGAAGACAACAATGAACGATTTAAA
GGATTTCTGCACACATGGGCAGGAATGAGCAAGCCAAGTAGTAAGAACACTGAGAAGGGATTATCTAGCATTAAA
AGCTACAAAGCCAAATTTAAATGGCATGGTCATTAGTGAAGATACCGTTTACAAAGTTACCACAGGCCCAATATTC
TCTATGGCTCTCCATCCATCAGAACTAGAACTTTGGTAGCAGTTGGGGCCAAATTTGGGCAAGTTGGACTTTGT
GATTTGACCCAGCAACCTAAAGAAGATGGAGTTTATGTTTTTACCCCCATAGTCAGCCAGTTAGCTGTCTTTAC
TTCTACCCGCCAATCCGGCCACATACTGTCACTGAGCTATGATGGCAGTTACGCTGTGGGGATTTTTTCCAGG
GCTATTTTTGAAGAGGTGTATAGAAATGAAAGAAGTAGCTTTTCTCTCTTCGACTTCTTGGCAGAAGATGCCTCC
ACTTTAATAGTAGGACACTGGGATGGAAATATGTCACTGGTGGATAGACGGACACCTGGAACCTTCTTATGAGAAA
CTTACCAGTTCTTCTATGGGAAAAATAAGAAGCTGTTTCATGTCCACCCAGTGCATAGACAGTATTTTATCACTGCC
GGATTGAGGGATACTCATATTTATGATGCAAGGCGATTGAATCCAGGAGAAGTCAGCCTTTGATTTCTTTGACT
GAACATACAAAGAGCATTGCTTCCGCCTATTTTTTACCTCTTACTGGTAACAGAGTGGTGACCACATGTGCTGAT
TGTAATCTGAGAATTTTTGACAGCAGCTGTATATCTTCTAAGATTCCGCTCCTCACCACCATCAGGCACAACACT
TTCAGTGGGCGATGGCTGACCAGGTTCCAAGCCATGTGGGATCCTAAACAAGAAGACTGTGTCTATAGTTGGCAGC
ATGGCCCATCCACGACGGGTAGAAATCTTCCATGAGACAGGAAAGAGGGTGCATTGTTTTGGTGGAGAATACCTT
GTCTCTGTGTGTTCCATCAATGCCATGCACCCAACCTCGGTATATTTTTGGCTGGAGGTAATTCAGCGGGAAGATA
CATGTTTTTATGAATGAAAAAGCTGCTGAGTTTTTTGGTTTAGGAACATCAATTTGTTCAAATTGACCACTGTCT
AAGGAGCCTAGTAATCGGCGTGCCTTAGTGTGTTTATGTGGTAATGTGTTACATTTAGCAATTATAACATTGTTT
TATTAATAAGACTATAAGAAGAGTGTACTTTTAGTAAGGGAGAAGTCTTGAGGGTTGCTTCTGCAGGACGGGGA
GGGAATTTGAGGGGAGGCTGAGGTGCCGTGAGGACTTTTTTTTTTTTTTTTTTTTGGAGATGGAGTTTTGCTCTT
GTTGCCCAGGCTGGAGTGCAATAGCGCGATCTTGGCTCACCGCAACCTCCGCCTCCAGGTTCAAGCGATTCTCC
TGCCCTCAGACTCCTAAGTAGCTGGGATTACAGGCACCTGCCACCACGCCTGGCTATTTTTTTTGTATTTTTTAGTAG
AGATGGGGTTTTCATCATGTTGGCCAGGCTGGTCTCGAGCTCCTGACCTCAGGTGATCTGCCCCGCTCGGCCTCCA
AAAGTGCTGGAATTACAGGCGTGAGCCACCATGCCTGGCCATCAGAACTTGTAATCAAGACAGTATGTTGAGAAA
TTCTAACATTATAAATTACAAAGCTTTGACTATTAAAGTTTTTGTGATCT

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FIGURE 455

MSRSGAAAEKADSRQRPQMKVNEYKENQNIAYVSLRPAQTTVLIKTAKVYLAPFSLSNYQLDQLMCPKSLSEKNS
NNEVACKKTKIKKTCRRIIPPCKMNTSSKAESTLQNSSSAVHTESNKLQPKRTADAMNLSVDVESSQDGDSEDT
TPALDFSGLSPIYERKRLKNIENADFFASLQLSESAARLREMIKRQPPKSKRKKPKRENGIGCRRSMRLKQVDP
SGVSLPAAPTPTTLVADETPLLPPGLEMTSENQEDNNERFKGFLHTWAGMSKPSSKNTEKGLSSIKSYKANLNG
MVIS EDTVYKVTTGPIFSMALHPSETRTLAVGAKFGQVGLCDLTQQPKEDGVYVFHPSQPVSCLYFSPANPAH
ILSLSYDGTLCGDFSRAIFEEVYRNERSSFSSFDLAEDASTLIVGHWDGNMSLVDRRTPGTSYEKLTSSSMGK
IRTVHVPVHRQYFITAGLRDTHIYDARRLNSRRSQPLISLTEHTKSIASAYFSPLTGNRVVTTCADCNLRIFDS
SCISSKIPLLTTIRHNTFTGRWLTRFQAMWDPKQEDCVIVGSMAPRRVEIFHETGKRVHSFGGEYLVSVCSINA
MHPTRYILAGGNSSGKIHFVFMNEKSC

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FIGURE 456

TGGCGGCCGCCGGCGTCCGCGCCATGGACCTAGGACCCTTGAACATCTGTGAAGAAATGACTATTCTGCATGGAG
GCTTCTTGCTGGCCGAGCAGCTGTTCCACCCTAAGGCACCTGGCAGAATTAACAAAGTCTGACTGGGAACGTGTTG
GACGGCCCATCGTGGAGGCCTTAAGGGAGATCTCCTCGGCTGCAGCACACTCCCAGCCCTTTGCCTGGAAGAAGA
AAGCCCTGATCATCATCTGGGCCAAGGTTCTGCAGCCGCACCCCGTGACCCCGTCCGACACAGAGACACGGTGGC
AGGAAGACCTGTTCTTCTCGGTGGGCAACATGATCCCCACCATCAACCACACCATCCTCTTCGAGCTGCTCAAAT
CCCTGGAAGCTTCTGGACTCTTTATCCAGCTCCTGATGGCCCTGCCACCACCATCTGCCATGCAGAACTAGAGC
GCTTTCTGGAACATGTGACCGTTGACACTTCTGCCGAAGACGTGGCCTTCTTCTGACATCTGGTGGGAGGTGA
TGAAGCACAAGGGTCACCCGCAGGACCCCTGCTCTCCAGTTTAGTGCAATGGCCCATAAAGTACCTGCCTGCCT
TAGATGAGTTCCCCCATCCTCCAAAGAGGCTTAGGTGACACCCAGACGCGTGCCCCACCATGCCCTGTTGGCCA
TGCTGCTCCGCGGGCTGACACAGATCCAGAGTCGGATCCTGGGCCCCGGGGAGGAAGTGCTGTGCGCTGGCCAACC
TGGCTGACATGCTGACTGTGTTTGCCTGACAGAGGACGACCCCGAGGAGGTGTCTGCAACCGTGTATCTGGACA
AACTGGCCACGGTGATCTCTGTGTGGAACTCGGACACCCAGAATCCCTACCACCAGCAGGCGCTGGCAGAGAAGG
TGAAGGAGGCAGAACGGGATGTGACCTGACCTCGCTGGCCAAACTCCCAGTGAGACCATTTTCGTGGGCTGCG
AGTTCTTGACACCTGCTGCGGGAGTGGGGGGAGGAGTTGCAGGCCGTGCTCCGCAGCAGCCAGGGGACAAGTT
ACGACAGCTACCGGCTGTGCGACAGTCTGACTTCCTTCAGCCAGAACGCGACGCTCTACCTGAACCGCACCAGCC
TGTCGAAGGAGGACAGGCAGGTGGTCTCTGAGCTGGCGGAGTGTGTGAGGACTTCCTGAGGAAAACGAGCACGG
TGCTGAAGAACAGGGCCTTGGAGGATATCACAGCTTCCATTGCCATGGCCGTCTATCCAGCAGAAGATGGACCGCC
ATATGGAAGTGTGCTACATTTTTGCCTCTGAGAAGAAGTGGGCCTTCTCGACGAGTGGGTAGCCTGCCTGGGGA
GTAACAGGGCCCTCTTCCGAGAGCCAGACTTGGTGTGAGGCTGCTGGAAACAGTGATAGACGTGAGCACAGCTG
ACAGAGCCATCCCTGAGTCTCAGATCCGGCAGGTGATCCACCTGATCCTGGAATGTTACGCAGACCTCTCCCTGC
CAGGTAATAAATAAAGTCCTTGAGGTATCCTGCGTTCCTGGGGGCGAAAGGGCCTCTCTGAAAAGTTGCTGGCTT
ATGTGGAGGGTTTTTCAGGAAGACCTCAATACAACCTTTTAACCAGCTCACTCAGAGTGCCTCCGAACAGGGCTTGG
CAAAAGCTGTGGCCTCCGTGGCCCGCCTGGTCATAGTGACCCGGAAGTCACGGTGAAGAAAATGTGCAGCCTGG
CTGTGGTCAATCTCGGCACCCACAAGTTTCTGGCCAGATTCTCACTGCCTTCCCTGCCCTTAGGTTTGTGGAAG
TGCAGGGTCCCAATTCTGCCACTTTTCATGGTGTGATGCCTCAAAGAAACCGTCTGGATGAAGTTCTCTACAC
CCAAGGAAGAAAAGCAATTTTTAGAGCTCCTGAACTGCCTGATGAGTCCCGTGAAACCCCAAGGGATTCCAGTGG
CTGCTCTTCTTGAGCCAGACGAGGTGCTGAAGGAATTTGCTCTGCCTTTCTTGAGGTTAGATGTTGAAGAGGTAG
ACCTCAGTCTGAGGATCTTCATCCAGACTCTAGAGGCAAACGCGTGCCGAGAGGAATACTGGCTCCAGACCTGCT
CCCCGTTTCCACTCCTCTTCAGCTTGTGCCAGCTCTTGGACCGCTTTAGCAAATACTGGCCGCTTCCCAAGGAGA
AGCGGTGCCTCTCTTTGGATAGGAAGGATCTAGCGATCCATATCCTGGAGCTCCTGTGTGAGATTGTATCAGCCA
ATGCTGAGACCTTCTCCCGGATGTCTGGATCAAGTCCCTGTCTGGCTCCACCGCAAGTTAGAACAGCTAGACT
GGACTGTGGGCCTGAGGCTGAAGAGCTTCTTCGAGGGGCACCTTCAAGTGTGAAGTGCCAGCCACACTTTTTGAGA
TCTGTAAGCTTTCAGAAGACGAGTGACCTCCCAGGCCACCCAGGGTACGGGGCTGGCACGGGGCTCCTGGCCT
GGATGGAGTGTGCTGCGTCTCCAGCGGCATCTCGGAGAGGATGCTGTCTCTCTTGGTGGTGGACGTGGGCAATC
CTGAGGAGGTGAGACTGTTTCAGCAAAGGCTTTCTGGTGGCCCTGGTGCAAGTCATGCCTTGGTGCAGCCCTCAGG
AGTGGCAGCGCCTTACCAGCTGACCAGGAGACTGCTGGAGAAGCAGCTCCTCCATGTCCCTTATAGCCTGGAAT
ATATTAGTTTGTTCCTGCTCAACCTGAAGCCCTTTGCCAGGAGTTGCAACTCTCCGTCTCTCTCTGAGGA
CTTTCCAGTTTCTCTGCAGCCATAGCTGTGTAATTGGCTTCCTCTGGAAGGCTGGAACCACGTGGTCAAACCTCC
TCTGTGGCAGTCTGACCCGCTCCTGGACTCAGTCAGGGCGATACAGGCAGCTGGCCCTTGGGTCAAGGACCAG
AGCAGGACCTGACCCAGGAAGCCCTGTTTGTGTTACACCCAGGTGTTCTGCCATGCTCTGCACATCATGGCCATGC
TCCACCCGGAGGTCTGTGAGCCACTCTACGTTTTAGCCTTGAAACCCTCACCTGCTATGAGACTTTGAGCAAGA
CCAACCCCTTCTGTGAGCTCCTTGCTCCAGAGGGCACACGAGCAGCGCTTCTTAAAGTCCATTGCTGAGGGCATTG
GCCCTGAAGAACGGCGCCAAACCCTGTTGCAGAAGATGAGCAGCTTCTGACTTGGCGTGGGGAGCTGGGCCCCAA
CATGGCGGGTCTGCAGAAGATCAGCAGCTTCTTACCTGTGCGGGAGCGAAAAAGCTGGGCTTCAACATGGCAGGT
CTGTAGGGGTGAGACCCGAGCAGCCTGGACTTTACAGTTATGTGAAACTGTCCACAAAAAGTCATGGCAATAATG
GTGTAAAGAAAATAGTTTCTTGGGTATTTGTAACGTACAAACTATCATAAAAATTCTCCTCTTTCGCATCTCAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 457

MDLGPLNICEEMTILHGGFLLAEQLFHPKALAEELTKSDWERVGRPIVEALREISSAAHSQPFawkKKALIIWA
KVLQPHPVTPSDTETRWQEDLFFSVGNMIPTINHTILFELLKSLEASGLFIQLLMALPTTICHAELERFLEHVTV
D TSAEDVAFFLDIWWEVMKHKGHPQDPLLSQFSAMAHKYLPADEFPHPPKRLRSDPDACPTMPLLAMLLRGLTQ
IQSRILGPGRKCCALANLADMLTVFALTEDDPQEV SATVYLDKLATVISVWNSDTQNPYHQQALAEKVKEAERDV
SLTSLAKLPSETIFVGCEFLHLLREWGEELQAVLRSSQGTSYDSYRLCDSLTSFSQ NATLYLNRTSLSKEDRQV
VSELAECVRDFLRKTSTVLKNRALEDITASIAMAVIQQKMDRHMEVCYIFASEKKWAFSDEWVACLGSNRALFRE
PDLVLRLLLETVIDVSTADRAIPESQIRQVIHLILECYADLSLPGKNKVLAGILRSWGRKGLSEKLLAYVEGFQED
LNTTFNQLTQSASEQGLAKAVASVARLVIVHPEVTVKKMC SLAVVNLGTHKFLAQILTAF PALRFVEVQGPNSSA
TFMV SCLKETVWMKFSTPKEEKQFLELLNCLMSPVKPQGIPVAALLEPDEV LKEFVLPFLRLDVEEVDLSLRIFI
Q TLEANACRE EYWLQTCSPFPLLFSLCQLLDRFSKYWPLPKEKRCLSLDRKDLAIHILELLCEIVSANAETFSPD
VWIKSLSWLHRKLEQLDWTVGLRLKSFFEGHFKCEVPATLFEICKLSEDEWTSQAHPGYGAGTGLLAWMECCCVS
SGISERMLSLLVVDVGNPEEVRLFSGFGLVALVQVMPWCSPQEWQRLHQLTRRLLEKQLLHVPYSLEYIQFVPLL
NLKPFAQELQLSVLFLRTFQFLCSHSCRNWLPLEGWNHVVKLLCGSLTRLLDSVRAIQAAGPWWQGP EQDLTQEA
LFVYTQVFCHALHIMAM LHPEVCEPLYVLALET LTCYETLSKTNPSVSSLLQRAHEQRFLKSIAEGIGPEERRQT
LLQKMSSF

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FIGURE 458

CGACGCGGGAGCCGCACGCGCCGGACGAGGCTCGCTGCGCTCCCTGTTGCCAGCGCGGGCCCGTTGAGGCGGAG
CCCTCAGTTCCCGGCCAGGACACGGTCTGGGCCGCCGAATCTCCGGCCGAAGAGCGGCGGCGGCAGCGGCGGAA
AAAAATGAAGAATGAAATTGCTGCCGTTGTCTTCTTTTACACAAGGCTAGTTCGAAAACATGATAAGTTGAAAAA
AGAGGCAGTTGAGAGGTTTGCTGAGAAATTGACCCTAATACTTCAAGAAAAATATAAAAAATCACTGGTATCCAGA
AAAACCATCGAAAGGACAGGCCTACAGATGTATTCGTGTCAATAAATTTAGAGAGTTGATCCTGATGTCCTGAA
AGCCTGTGAAAACAGCTGCATCTTGTATAGTGACCTGGGCTTGCCAAAGGAGCTCACTCTCTGGGTGGACCCATG
TGAGGTGTGCTGTCTAGAGATGGGGTTTACCCTGTTGGCCAGACTGCTCTCAAACCTCTGACCTCGTGATCCG
CCCGCCTTGGCCTCCCAAAGCGCTGGATTACAGGCGTGAGCCACTGCGCCCGCCTCCTCCTTTTTGATTATGTA
TGGAGAGAAAAACAATGCATTCAATTGTTGCCAGCTTTGAAAATAAAGATGAGAACAAGGATGAGATCTCCAGGAA
AGTTACCAGGGCCCTTGATAAGGTTACCTCTGATTATCATTACAGGATCCTCTTCTTCAGATGAAGAAACAAGTAA
GGAAATGGAAGTGAACCCAGTTTCGGTGACTGCAGCCGCAAGTCCTGTGTACCAGATTTAGAACTTATATTTCC
ACCTCTTCCAATGTGGCACCCCTTTGCCCAGAAAAAAGCCAGGAATGTATCGAGGGAATGGCCATCAGAATCACTA
TCCTCCTCCTGTTCCATTTGGTTATCCAAATCAGGGAAGAAAAAATAAACCATATCGCCCAATTCCAGTGACATG
GGTACCTCCTCCTGGAATGCATTGTGACCGGAATCACTGGATTAATCCTCACATGTTAGCACCTCACTAACTTCG
TTTTTGATTGTGTTGGTGTCTATGTTGAGAAAAAGGTAGAATAAACCTTACTACACATTAAAAGTTAAAAGTTCTT
ACTAATAGTAGTGAAGTTAGATGGGCCAAACCATCAAACCTTATTTTTATAGAAGTTATTGAGAATAATCTTTCTT
AAAAAATATATGCACITTTAGATATTGATATAGTTTGAGAAATTTTATTAAAGTTAGTCAAGTGCCTAAGTTTTTA
ATATTGGACTTGAGTATTTATATATTGTGCATCAACTCTGTTGGATACGAGAACCCTGTAGAAGTGGACGATTTG
TTTTAGCCCCCTTTGAGAATTTACTTTATGGAGCGTATGTAAGTTATTTATATACAAGGAAATCTATTTTATGTCG
TTGTTTAAGAGAATTGTGTGAAATCATGTAGTTGCAAATAAAAAATAGTTTGAGGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAA

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FIGURE 459

MKNEIAAVVFFFTRLVRKHDKLKKEAVERFAEKLTLILQEKYKNHWYPEKPSKGQAYRCIRVNKFQRVDPDVLKA
CENSILYSDLGLPKELTLWVDPCEVCCRDRGVSPCWPDSCQTPDLVIRPPWPPKALDYRREPLRPASSFLIMYG
EKNNAFIVASFENKDENKDEISRKVTRALDKVTSDYHSGSSSSDEETSKEMEVKPSVTAASFPVYQISELIFPP
LPMWHPLPRKKPGMYRGNGHQNHYPFVPFGYPNQGRKNKPYRPIPVTVVPPPGMHCDRNHWINPHMLAPH

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FIGURE 460

CAGGCCAGGACTCCACAAGGCTGGTCCCCTGCCCTGGAGCAACTTAAACAGGCCCTCTGGCCAGCCTGGAACCCCT
GAGATGGCCTCCAGCTCAGGCAGCAGTCCTCGCCCGGCCCTGATGAGAATGAGTTTCCCTTTGGGTGCCCTCCC
ACCGTCTGCCAGGACCCAAAGGAGCCCAGGGCTCTCTGCTGTGCAGGCTGTCTCTCTGAGAACCCGAGGAATGGC
GAGGATCAGATCTGCCCCAAATGCAGAGGGGAAGACCTCCAGTCTATAAGCCCAGGAAGCCGTCTTCGAACTCAG
GAGAAGGCTCACCCCGAGGTGGCTGAGGCTGGAATTGGGTGCCCTTTGCAGGTGTGCGCTGCTCCTTCAAGGGA
AGCCACAGTCTGTGCAAGAGCATGAGGTCACCTCCCAGACCTCCCACCTAAACCTGCTGTTGGGGTTTCATGAAA
CAGTGGAAGGCCCGGCTGGGCTGTGGCCTGGAGTCTGGGCCATGGCCCTGGAGCAGAACCTGTTCAGACCTGCAG
CTGCAGGCAGCCGTGGAAGTGGCGGGGACCTGGAGGTCGATTGCTACCGGGCACCTGCTCCGAGAGCCAGGAG
GAGCTGGCCCTGCAGCACTTCATGAAGGAGAAGCTTCTGGCTGAGCTGGAGGGGAAGCTGCGTGTGTTTGAGAAC
ATTGTTGCTGTCTCAACAAGGAGGTGGAGGCCCTCCCACCTGGCCCTGGCCACCTCTATCCACCAGAGCCAGCTG
GACCGTGAGCGCATCCTGAGCTTGGAGCAGAGGGTGGTGGAGCTTCAGCAGACCTGGCCCAGAAAGACCAGGCC
CTGGGCAAGCTGGAGCAGAGCTTGCGCCCTCATGGAGGAGGCCCTCCTTCGATGGCACTTTCTGTGGAAGATCACC
AATGTCACCAGGCGGTGCCATGAGTCGGCCTGTGGCAGGACCGTCAGCCTCTTCTCCCCAGCCTTCTACACTGCC
AAGTATGGCTACAAGTTGTGCCTGCGGCTGTACCTGAATGGAGATGGCACTGGAAAGAGAACCCATCTGTGCTC
TTATCGTGATCATGAGAGGGGAGTATGATGCGCTGCTGCCGTGGCCTTTCCGGAACAAGGTCACCTTCATGCTG
CTGGACCAGAACAACCGTGAGCACGCCATTGACGCCTTCGGCCTGACCTAAGCTCAGCGTCCTTCAGAGGGCCC
CAGAGTGAACCAACGTGGCCAGTGGATGCCCACTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCC
TACGTGAAGGACGACACAATGTTCTCAAGTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGG
AGCTCCAACCTCAGAAGGGAGCTAGCCAGAGGACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAA
GATGGGTGAAGGCTGGCATGATCCAAGCAAGACTGAGGGGTGCACTTCGGGCTGGCCATCTGGTTAGGATGGCAG
GACGTGGGCTGGGCCCACAAAGGCAAAGGGTCCAGAAGGAGACAGGCAGAGCTGCTCCCCCTGTCACGGACCATG
CGACACTGGGAGGCCAGTGAGCCACTCCGGCCCCGAATGTTGAGGTGGACTCTCACCAAATGAGAAGAAAAATGGA
ACCAGGCTTGGAACCGTAGGACCCAAGCAGAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGA
CCTGGACACAGGCCTGCTCTCTTTTTCTCCAGGGTCAGAAACAGGACCGGGTGAAGGGATGGGGTGCCAGTTTG
AATGCAGTCTGTCCAGGCTCGTCATTGGAGGTGAACAAGCAAACCCAGAGGGCTCCACTAGGACTTCAAATTGGG
GGTTGGATTGGAAGACTTTTAAGTTTCCTTCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAG
TCCTAGAGCTACAGGGGTTCTGGAAACATTGAGGAGCTTCCTGTCTCCAGCTCCTCACTCACCTTCAGTAACC
CCCACTGGACTGACCTGGTCCACAGGGCACCTGCCACCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAG
CACACCCAGCCCCACATCCTGTGCCTCCATCAGCTAAACACCACGTCACCTTCATGCAGGTGAAACCCAGTCACT
GTGAGCTCCCAGGTGCAGCCAGAGGCACCTCAAGAAGAAGAGGGGCATAAACTTTCTCTTCTGCTAGAGGCC
CCACCTTTGGTGCTTTCCAGAATCCCGTAACACCTGATTAAGTGGGATCCACTTCTTTTCAGCAGACTGATCAG
GACCTCCAAGCCACTGAGCAATGTATAACCCCAAAGAAATAATTTTTAGAAATCTCTTTCGAAGTTTTCTTAAAAA
AAAAAAAAAAAA

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FIGURE 461

MASSSGSSPRPAPDENEFFPGCPPTVCQDPKEPRALCCAGCLSENPRNGEDQICPKCRGEDLQSI SPGSRLRTQE
KAHPEVAEAGIGCPFAGVGCSFKGSPQSVQEHEVTSQTSHLNLLLGFMKQWKARLGCGLESGPMALEQNLSDLQL
QAAVEVAGDLEVDCYRAPCSESQEELALQHFMKEKLLAELEGKLRVFENIVAVLNKEVEASHLALATSIHQSQLD
RERILSLEQRVVELQQTLAQKDQALGKLEQSLRLMEEASFDGTFWKITNVTRCHESACGRTVSLFSPAFTAK
YGYKLCLRLYLNGDGTGKRTHLSLFIVIMRGEYDALLPWPFERNKVTFMLLDQNNREHAIDAFRDLSSASFQRPQ
SETNVASGCPLFFPLSKLQSPKHAYVKDDTMFLKCIVETST

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FIGURE 462

AGACGCAAGACGCCGGGCCTACAGCGGGAGCGTGAGGAAAGCCGTGCGTTGCGTTCCAAGGCATCTGTGAGCCCG
CGGAGTATACACCATGAGCAAAGCTCACCCCTCCCGAGTTGAAAAAATTTATGGACAAGAAGTTATCATTGAAATT
AAATGGTGGCAGACATGTCCAAGGAATATTGCGGGGATTGATCCCTTTATGAACCTTGTGATAGATGAATGTGT
GGAGATGGCGACTAGTGGACAACAGAACAATATTGGAATGGTGGTAATACGAGGAAATAGTATCATCATGTTAGA
AGCCTTGGAACGAGTATTAAAATAATGGCTGTTTCAGCAGAGAAACCCATGTCCTCTCTCCATAGGGCCTGTTTTACT
ATGATGTAAAAATTAGGTCATGTACATTTTCATATTAGACTTTTTGTAAATAAACTTTTGTAATAGTCAAAAAT
GCTTCTCAGATGTTCTGAATATAGAATATCAGCTCTCATTCCAGTTTTTTCTAACATGAATTTTCCTGGTTGAC
ATTGATTTCAAAGGGTTTTATGCATTAAAGTGAAAGAATCTTATTAAATGCGAAAAAAAAAAAAAAAAAAAAAA
AAAAAA

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FIGURE 463

MSKAHPPELKKFMDKKLSLKLNGGRHVQGILRGFDPFMNLVIDECVEMATSGQQNNIGMVVIRGNSIIMLEALER
V

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FIGURE 464

CGGGAGGCGGCAGCGGCTGCAGCGTTGGTAGCATCAGCATCAGCATCAGCGGCAGCGGCAGCGGCCTCGGGCGGG
GCCGCGCGGACGGACAGGCGGACAGAAGCGCCAGGGGCGCGCTCCCGCCCGGGCCGGCCATGGAGGGCGCCTC
CTTCGGCGCGGGCCGCGCAGGGGCGCCCTGGACCCCGTGAGCTTTGCGCGGCGGCCCCAGACCCCTGCTCCGGGT
CGCGTCTCTGGGTGTTCTCCATCGCCGTCTTCGGGCGCATCGTCAACGAGGGCTACGTGAACACCGACAGCGGCC
CGAGCTGCGCTGCGTGTTCAACGGGAACGCGGGCGCCTGCCGCTTCGGCGTCGCGCTGGGCTCGGAGCCTTCCT
CGCCTGCGCGCCTTCCTGCTGCTCGATGTGCGCTTCAGCAAATCAGCAGCGTCCGCGACCGCCGCGCGCGGT
GTTGCTGGACCTGGGCTTCTCAGGACTCTGGTCCTTCCTGTGGTTTCGTGGGCTTCTGCTTCCTCACCAATCAGTG
GCAGCGCACGGCGCCAGGGCCGGCCACGACGAGGCGGGGACGCGGCGCGGGCCGCCATCGCCTTCAGCTTCTT
CTCCATCCTCAGCTGGGTGGCGCTCACCCTGAAGGCCCTGCAGCGGTTCCGCTGGGCACCGACATGCTACTCTT
CGCCACCGAACAGCTGAGCACCGGGGCGAGCCAGGCCTACCCCGCTATCCGGTGGGCAGCGGCGTGAGGGGCAC
CGAGACCTACCAGAGCCCGCCCTTCACCGAGACCCTGGACACCAGCCCCAAAGGGTACCAGGTGCCCGCCTACTTA
GCGGCTGGCAGGCACAGACCAGGGCTCCAAGGCCACCCACCAACGCAGGCCCCAGGGTCTCCGGGACCTCCCTT
GGGTCTTCCAGCTCAGTGCCGCGGACAGAGTAGGTGGCCGCTTTGCGCCATCCGGGGCCAAGAGGGGGTGAGCC
CGCGTGTCTGGGCTGCCCCTGCCAAGTTCCTCCAGTCCCTCAGCACCTGGCCCCAGGACTGAGGTCTTGAGAAGG
GGATAGCACTGCCCAGGACGTGTGTCCCTAGCCTGGAATGGACTGGCCTGGGGAAGGCTTTCCCTCTTGGGCCA
CACCTGCTCACTCTGGGGTTGGGGGTCCAGCTGCCCTCTACGATCAGGTGCAGGGGCTGCCCAGGACAAAGCGGG
GGCAGGGGAAAGACACCACCTCGCCCCAAGACTGGGGATCCTGGCCACTGTTCCCATCCCATGTCCCTGTGGGT
AGTGACTGTCTCGTTTCTGTTCATGGTGGTGCCTCCCGTCCGGAGCCACTCTCCACTTTCTCTCACAGGCTGCTAG
AACAGCCCAGCCCTGTCACTGTTGTGATCATGGTCCAGTCTTCGGGTTTACCTCCTAGTACTCCACAAGCTGCT
CCTCTCTCTGTGGCCCCGGCCCCCTGCCAGGTGTGGGTGGTTCTGGCCAGGAAGGCACAAGGTAGCTGTGGGCCA
AGACACCAGCCCTGTCTTAGCCCTTCAGTAAGACCTTGCCAGGAGAGGAGAAGGATGCCTGGGTGCCAGGCAAGA
CAAGCCCCCTCAGCAGGAGAGAGAGGCCAGAGGCTCCAGCTGGCCACCGTGCCCCACAAGATGGCCCCCTGTGTGGTT
CCCTTTACCTTGGCTTCCTGGCCAGTCCCTGCCTCTCCACCTGCACCCTGCTTCCTGGCCAGTCCCAGGTGG
AGTCCCTCTGCATAGCTGACTACTCATGATTGCTCAAAGCTGGCTTTTACATTAAGTCAACACCAAACGTGGT
TGCCACATTTTCATCAGACAGACACCTCCCTCTGGAGATGCAGTTGAGTGACAACCTTGTTACATTGTAGCCTAGA
CCAATTCTGTGTGGATATTTAAGTGAACATGTTTACAATTTTGTATATATCACTCTCTCCCTCTCCTGAAAGAC
CAGAGATTGTGTATTTTCACTGTCCCATGTTCCGACTGCACCTTCTTTACAATAAAGACTGTAAGTGAAGTGAAGT
GTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 465

MEGASFGAGRAGAALDPVSFARRPQTLLRVASWVFSIAVFGPIVNEGYVNTDSGPRLRCVFNGNAGACRFGVALG
LGAFLACAAFLLLDVRFQQISSVRDRRAVLLDLGFSGLWSFLWFVGFCFLTNQWQRTAPGPATTQAGDAARAAI
AFSFFSILSWVALTVKALQRFRLGTDMSLFATEQLSTGASQAYPGYPVGSGVEGTETYQSPPFTETLDTSPKGYQ
VPAY

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FIGURE 466

ATACGACTACACCTGCTCCGGAGCCCCGCGGCGGTACCTGCAGCGGAGGAGCTCTGTCTTCCCCTTCATCTCACGC
GAGCCCCGGCGTCCCGCCGCGTGCGCCCCGGCGCAGCCCCGCCAGTCCGCCCCGAGCCCCGCCAGTCGCCGCGCTGC
ACGCCCCGGGGTGAACCCCTCTGCCCTCGCTGGGACAGAGGGCCCCCGCAGCCGT**CATG**CTTTCCGCCATCTACACAG
TCCTGGCGGGACTGCTGTTCCCTGCCGCTCCTGGTGAACCTCTGCTGCCCATACTTCTTCAGGACATAGGCTACT
TCTTGAAGGTGGCCGCCGTGGGCCGGAGGGTGCGCAGCTACGGGCAGCGCGCGGCCGCCAGCATCCTGCGGG
CGTTCCTGGAGAAAGCGCGCCAGACGCCACACAAGCCTTTTCTGCTCTTCCGCGACGAGACTCTCACCTACGCGC
AGGTGGACCGGCGCAGCAATCAAGTGGCCCCGGGCGCTGCACGACCACCTCGGCCTGCGCCAGGGAGACTGCGTGG
CGTCCCTTATGGGTAAACGAGCCGGCCTACGTGTGGCTGTGGCTGGGGCTGGTGAAGCTGGGCTGTGCCATGGCGT
GCCTCAATTACAACATCCGCGCGAAGTCCCTGCTGCACTGCTTCCAGTGCTGCGGGGCGAAGGTGCTGCTGGTGT
CGCCAGAACTACAAGCAGCTGTCTGAAGAGATACTGCCAAGCCTTAAAAAAGATGATGTGTCCATCTATTATGTGA
GCAGAACTTCTAACACAGATGGGATTGACTCTTTCCCTGGACAAAGTGGATGAAGTATCAACTGAACCTATCCCAG
AGTCATGGAGGTCTGAAGTCACTTTTTCCACTCCTGCCTTATACATTTATACTTCTGGAACCACAGGTCTTCCAA
AAGCAGCCATGATCACTCATCAGCGCATATGGTATGGAAGTGGCCTCACTTTTGTAAGCGGATTGAAGGCAGATG
ATGTCATCTATATCACTCTGCCCTTTTACCACAGTGCTGCACTACTGATTGGCATTACGGATGTATTGTGGCTG
GTGCTACTCTTGCCCTTGCGGACTAAATTTTCAGCCAGCCAGTTTTGGGATGACTGCAGAAAATACAACGTCACTG
TCATTCAGTATATCGGTGAAGTGTTCGGTATTTATGCAACTCACCACAGAAACCAAATGACCGTGATCATAAAG
TGAGACTGGCACTGGGAAATGGCTTACGAGGAGATGTGTGGAGACAATTTGTCAAGAGATTTGGGGACATATGCA
TCTATGAGTTCTATGCTGCCACTGAAGGCAATATTGGATTTATGAATTATGCGAGAAAAGTTGGTGCTGTTGGAA
GAGTAAACTACCTACAGAAAAAAATCATAAATTATGACCTGATTAAATATGATGTGGAGAAAGATGAACCTGTCC
GTGATGAAAATGGATATTGCGTCAGAGTTCCCAAAGGTGAAGTTGGACTTCTGGTTTTGCAAAATCACACAACCTTA
CACCATTTAATGGCTATGCTGGAGCAAAGGCTCAGACAGAGAAGAAAAAACTGAGAGATGTCTTTAAGAAAGGAG
ACCTCTATTTCAACAGTGGAGATCTCTTAATGGTTGACCATGAAAATTTTCATCTATTTCCACGACAGAGTTGGAG
ATACATTCGGTGGAAGGGGAAAATGTGGCCACCACTGAAGTTGCTGATACAGTTGGACTGGTTGATTTTGTCC
AAGAAGTAAATGTTTATGGAGTGCATGTGCCAGATCATGAGGGTCGCATTGGCATGGCCTCCATCAAATGAAAG
AAAACCATGAATTTGATGGAAAGAACTCTTTAGCACATTGCTGATTACCTACCTAGTTATGCAAGGCCCCGGT
TTCTAAGAATACAGGACACCATTGAGATCACTGGAACCTTTTAAACACCGCAAAATGACCCTGGTGGAGGAGGGCT
TTAACCTGCTGTCATCAAAGATGCCTTGTATTTCTTGGATGACACAGCAAAAATGTATGTGCCTATGACTGAGG
ACATCTATAATGCCATAAGTGCTAAAACCTGAAACT**CGAA**TATTTCCAGGAGGATAACTCAACATTTCCAGAA
AGAACTGAATGGACAGCCACTTGATATAATCCAACCTTAATTTGATTGAAGATTGTGAGGAAATTTGTAGGAA
ATTTGCATACCCGTAAAGGGAGACTTTTTTAAATAACAGTTGAGTCTTTGCAAGTAAAAAGATTTAGAGATTATT
ATTTTTAGTGTGCACCTACTGTTTGTATTTGCAAACTGAGCTTGTGGAGGGAAGGCATTATTTTTTAAATAC
TTAGTAAATTAAATGAAC

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FIGURE 467

MLSAIYTVLAGLLFLPLLVLNLCOPYFFQDIGYFLKVAAGRRVRSYGQRRPARTILRAFLEKARQTPHKPFLLFR
DETLTYAQVDRRSNQVARALHDHLGLRQGDCAVLLMGNEPAYVWLWLGLVKLGCMACLNYNIRAKSLLHCFQCC
GAKVLLVSPQLAAVEEILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEP IPESWRSEVTFSTPALYIYT
SGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWDD
CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYA
RKVGAVGRVNYLQKKIITYDLIKYDVEKDEFVRDENGVCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKL
RDVFKKGDLYFNSGDLLMVDHENFIYFHDRVGDTRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIG
MASIKMKENHEFDGKKLFQHIADYLP SYARPREFLRIQDTIEITGTFKHKMTLVEEGFNPAVIKDALYFLDDTAK
MYVPMTEDIYNAISAKTLKL

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FIGURE 468

ATACGACTACACCTGCTCCGGAGCCCGCGGCGGTACCTGCAGCGGAGGAGCTCTGTCTTCCCCTTCATCTCACGC
GAGCCCGGCGTCCCGCCGCGTGCGCCCGGCGCAGCCCGCCAGTCCGCCCGGAGCCCGCCAGTCGCCGCGCTGC
ACGCCCGGGGTGAACCCTCTGCCCTCGCTGGGACAGAGGGCCCCGAGCCGTCATGCTTTCCGCCATCTACACAG
TCCTGGCGGGACTGCTGTTCTCGCCCTCCTGGTGAACCTCTGCTGCCCATACTTCTTCCAGGACATAGGCTACT
TCTTGAAGGTGGCCGCCGTGGGCCGGAGGGTGGCGAGCTACGGGCAGCGGCGGCCGGCGCGCACCATCCTGCGGG
CGTTCCTGGAGAAAGCGCGCCAGACGCCACACAAGCCTTTTCTGCTCTTCCGCGACGAGACTCTCACCTACGCGC
AGGTGGACCGGCGCAGCAATCAAGTGGCCCGGGCGCTGCACGACCACCTCGGCCTGCGCCAGGGAGACTGCGTGG
CGCTCCTTATGGGTAACGAGCCGGCCTACGTGTGGCTGTGGCTGGGGCTGGTGAAGCTGGGCTGTGCCATGGCGT
GCCTCAATTACAACATCCGCGCGAAGTCCCTGCTGCACTGCTTCCAGTGTGCGGGGCGAAGGTGCTGCTGGTGT
CGCCAGAACTACAAGCAGCTGTGCAAGAGATACTGCCAAGCCTTAAAAAGATGATGTGTCCATCTATTATGTGA
GCAGAACTTCTAACACAGATGGGATTGACTCTTTCCTGGACAAAGTGGATGAAGTATCAACTGAACCTATCCAG
AGTCATGGAGGTCTGAAGTCACTTTTCCACTCCTGCCTTATACATTTATACTTCTGGAACACAGGTCTTCCAA
AAGCAGCCATGATCACTCATCAGCGCATATGGTATGGAAGTGGCCTCACTTTTGTAAAGCGGATTGAAGGCAGATG
ATGTCATCTATATCACTCTGCCCTTTTACCACAGTGTGCACTACTGATTGGCATTACGGATGTATTGTGGCTG
GTGCTACTCTTGCTTGCCTTGCCTGACTAAATTTTCCAGCCAGCCAGTTTGGGATGACTGCAGAAAATACAACGTCCTG
TCATTAGTATATCGGTGAAGTGTTCGGTATTTATGCAACTCACCACAGAAACCAAATGACCGTGATCATAAAG
TGAGACTGGCACTGGGAAATGGCTTACGAGGAGATGTGTGGAGACAATTTGTCAAGAGATTTGGGGACATATGCA
TCTATGAGTTCTATGCTGCCACTGAAGGCAATATTGGATTTATGAATTATGCGAGAAAAGTTGGTGCTGTTGGAA
GAGTAACTACCTACAGAAAAAATCATAACTTATGACCTGATTAAATATGATGTGGAGAAAGATGAACCTGTCC
GTGATGAAAATGGATATTGCGTCAGAGTTCCCAAAGGTGAAGTTGGACTTCTGGTTTGCAAAATCACACAACCTA
CACCATTTAATGGCTATGCTGGAGCAAAGGCTCAGACAGAGAAGAAAAAACTGAGAGATGTCTTTAAGAAAGGAG
ACCTCTATTTCAACAGTGGAGATCTCTTAATGGTTGACCATGAAAATTTTCATCTATTTCCACGACAGAGTTGGAG
ATACATTCCGGTGGAAAGGGGAAAAATGTGGCCACCCTGAAGTTGCTGATACAGTTGGACTGGTTGATTTGTCC
AAGAAGTAAATGTTTATGGAGTGCATGTGCCAGATCATGAGGGTCGCATTGGCATGGCCTCCATCAAAATGAAAG
AAAACCATGAATTTGATGGAAAGAACTCTTTCAGCACATTGCTGATTACCTACCTAGTTATGCAAGGCCCGGT
TTCTAAGAATACAGGACACCATTGAGATCACTGGAACCTTTTAAACACCGCAAAATGACCCTGGTGGAGGAGGGCT
TTAACCCTGCTGTCTATCAAAAGATGCCTTGTATTTCTTGGATGACACAGCAAAAATGTATGTGCCTATGACTGAGG
ACATCTATAATGCCATAAGTGCTAAAACCTGAACTCTGAATATTCCAGGAGGATAACTCAACATTTCCAGAA
AGAACTGAATGGACAGCCACTTGATATAATCCAACCTTTAATTTGATTGAAGATTGTGAGGAAAATTTGTAGGAA
ATTTGCATACCCGTAAAGGGAGACTTTTTTAAATAACAGTTGAGTCTTTGCAAGTAAAAAGATTTAGAGATTATT
ATTTTTCAGTGTGCACCTACTGTTTGTATTTGCAAACTGAGCTTGTTGGAGGGAAGGCATTATTTTTTAAATAC
TTAGTAAATTAAATGAAC

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FIGURE 469

MLSAIYTVLAGLLFLPLLVLNLCPPYFFQDIGYFLKVAAGRRVRSYGQRRPARTILRAFLEKARQTPHKPFLLFR
DETLTYAQVDRRSNQVARALHDHLGLRQGDCAVLLMGNEPAYVWLWLGLVKLGCMACLNYNIRAKSLLHCFQCC
GAKVLLVSPELQAAVEEILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYT
SGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPHYHSAALLIGIHGCIVAGATLALRTKFSASQFWDD
CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYA
RKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGVCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKL
RDVFKKGDLYFNSGDLLMVDHENFIYFHDRVGDTRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIG
MASIKMKENHEFDGKKLFQHIADYLP SYARPRFLRIQDTIEITGTFKHKMTLVEEGFNPAVIKDALYFLDDTAK
MYVPMTEDIYNAISAKTLKL

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FIGURE 470

CTCTCTCTCTATCTCTCTCAGAAATGACAATTCTAGGTACAACCTTTTGGCATGGTTTTTTCTTTACTTCAAGTCGT
TTCTGGAGAAAGTGGCTATGCTCAAAATGGAGACTTGGAAGATGCAGAACTGGATGACTACTCATTCTCATGCTA
TAGCCAGTTGGAAGTGAATGGATCGCAGCATTCACTGACCTGTGCTTTTGAGGACCCAGATGTCAACACCACCAA
TCTGGAATTTGAAATATGTGGGGCCCTCGTGGAGGTAAAGTGCCTGAATTTTCAGGAACTACAAGAGATATATTT
CATCGAGACAAAGAAATTCTTACTGATTGGAAGAGCAATATATGTGTGAAGGTTGGAGAAAAGAGTCTAACCTG
CAAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGCTCCTTTTGACCTGAGTGTCACTATCGGGAAGGAGC
CAATGACTTTGTGGTGACATTTAATACATCACACTTGCAAAAGAAGTATGTAAAAGTTTTAATGCATGATGTAGC
TTACCGCCAGGAAAAGGATGAAAACAAATGGACGCATGTGAATTTATCCAGCACAAAGCTGACACTCCTGCAGAG
AAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTTCGATCCATCCCTGATCACTATTTTAAAGGCTTCTGGAG
TGAATGGAGTCCAAGTTATTACTTCAGAACTCCAGAGATCAATAATAGCTCAGGGGAGATGGATCCTATCTTACT
AACCATCAGCATTTTGTAGTTTTTCTCTGTCTGCTCTGTTGGTCATCTTGGCCTGTGTGTTATGGAAAAAAGGAT
TAAGCCTATCGTATGGCCCAGTCTCCCCGATCATAAGAAGACTCTGGAACATCTTTGTAAGAAACCAAGAAAAA
TTTAAATGTGAGTTTCAATCCTGAAAGTTTCCTGGACTGCCAGATTATAGGGTGGATGACATTCAAGCTAGAGA
TGAAGTGAAGGTTTTCTGCAAGATACGTTTCCTCAGCAACTAGAAGAATCTGAGAAGCAGAGGCTTGGAGGGGA
TGTGCAGAGCCCCAACTGCCCATCTGAGGATGTAGTCGTCCTCCAGAAAGCTTTGGAAGAGATTATCCCTCAC
ATGCCTGGCTGGGAATGTCAGTGCATGTGACGCCCCATTCTCTCTCTTCCAGGTCCCTAGACTGCAGGGAGAG
TGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCCTTGGGACTACAAACAGCACGCTGCCCCCTCC
ATTTTCTCTCCAATCTGGAATCCTGACATTGAACCCAGTTGCTCAGGGTCAGCCCATTCTTACTTCCCTGGGATC
AAATCAAGAAGAAGCATATGTACCATGTCCAGCTTCTACCAAACAGTGAAGTGTAAGAAACCCAGACTGAAC
TTACCGTGAGCGACAAAGATGATTTAAAAGGGAAGTCTAGAGTTCTAGTCTCCCTCACAGCACAGAGAAGACAA
AATTAGCAAAACCCCACTACACAGTCTGCAAGATTCTGAAACATTGCTTTGACCACTCTTCTGAGTTCAAGTGGC
ACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTGGTGCACAAGGTTTAAGGTGACCCAATGATTC
AGCTATTT

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FIGURE 471

MTILGTTFGMVFSLLQVVSGESGYAQNGDLEDAELDDYSFSCYSQLEVNGSQHSLTCAFEDPDVNTTNLEFEICG
ALVEVKCLNFRKLQEIYFIETKKFLLIGKSNICVKVGEKSLTCKKIDLTITIVKPEAPFDLSVIYREGANDFVVTF
NTSHLQKKYVKVLMHDAVYRQEKDENKWTHVNLSTKLTLQRLQPAAMYKIKVRSIPDHYFKGFSEWSPSY
FRTPEINNSSGEMDPILLTISILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLCKKPRKNLNVSNP
ESFLDCQIHRVDDIQARDEVEGFLQDTFPQOLEESEKQRLGGDVQSPNCPSEDVVVTPESFGRDSSLTCLAGNVS
ACDAPILSSSRSLDCRESGKNGPHVYQDLLLSLGTNSTLPPFSLQSGILTLNPVAQQQFILTSLGSNQEEAYV
TMSSFYQNQ

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FIGURE 472

GCCCAGACCTATGGATTGAAAGCGTGTGCTTTACCCATCTGCTGTCTTGCTCCATCTGAGACCAGAGCCAAGATC
TGCCCAGGACTGGAATGCTTTCCCGAGTGGCTTGAGTTGGAGCCTGGGACTAGGAGCAGCCTTATTGAGGTACAA
TTCATGTGCTTGTGGGTTTGGATGGCACAATCTGTGTCTGGGCTAAGGAAAGCAGACTTGGCACCAACATTAACC
CTGACAGATCCAGGCATCTATTCCAGGAACTGGAAGCCAAGCGCAACAGGTGCTTGAGGGTCATCATGATCAGCC
CAGACCCCAGGCCCTCCCCTGGCTTGCCCCGGTGGGCTGAGAGCTATGAGGCCAAGTGTGAGCGCAGGCAAGAGA
TCCGTGAAAGCCGCCGCTGCCGTCCCAATGTGACCACTTGCCGCCAGGTGGGGAAGACGCTGAGGATCCAACAGA
GAGAGCAGCTCCAGAGAGCTCGACTGCAGCAGTTCTTCAGGAGGAGGAACCTGGAGCTAGAGGAGAAGGGCAAAG
CGCAGCATCCCCAGGCCAGGGAGCAAGGGCCCTCCAGGCGGCCAGGACAGGTGACAGGCACCAGCTCTGAAGTCT
TTCCAGCCCAGCATCCTCCTCCCTCAGGCATCTGCAGGGATCTGTCTGACCACCTCTCCTCACAGGCTGGGGGCC
TTCTCCACAGGACACTCCCATCAAGAAGCCACCCAAACACCACCGTGGTACTCAGACAAAGGCAGAAGGACC
CAATTAAGAACGATGCCAGTCAGCAAAACCAATTACGGAGTTGCAGTTCTGGATAAGGAAATCATCCAGCTTTCTG
ATTACCTCAAAGAGGCCCTACAAAGGGAGCTGGTCCTAAAACAGAAAATGGTGATTCTCCAAGACCTACTGTCCA
CTCTGATTTCAGGCCTCTGACAGCTCTTGGAAGGGACAGCTTAATGAAGACAAACTGAAGGGGAAACTGAGATCCT
TAGAAAACCAGCTATACACCTGTACCCAGAAATACTCCCCCTGGGGAATGAAAAAGTACTACTGGAGATGGAAG
ACCAGAAAAACAGCTATGAGCAGAAGGCCAAGGAGTCACTGCAGAAAGTGCTGGAGGAGAAAATGAATGCAGAGC
AGCAACTACAGAGCACACAGCGATCCCTGGCCCTGGCAGAGCAGAAGTGTGAAGAGTGGAGGAGCCAGTATGAGG
CTCTGAAGGAGGACTGGAGGACCCCTGGGACCCAGCACAGGGAGCTGGAGAGCCAACTCCACGTGCTTCAGTCCA
AACTGCAGGGAGCAGATAGCAGGGACTTACAGATGAACCAGGCCCTGCGATTTTTGGAAAATGAGCACCAGCAAC
TGCAGGCCAAGATTGAATGCCTGCAAGGGGACAGAGACCTGTGCAGCTTGATACCCAGGACCTACAAGATCAAC
TAAAAAGGTCAGAGGCAGAGAACTCACCTGGTGACCAGAGTACAGCAGTTGCAGGGTTTGCTTCAAAATCAAT
CCTTACAGCTTCAAGAACAGGAGAACTCTTAACAAAGAAAGATCAGGCTTTGCCCGTGTGGAGTCCAAAGTCCT
TCCCTAACGAAGTGGAGCCTGAGGGTACAGGGAAGGAGAAAGACTGGGATCTCAGAGACCAGCTGCAAAAGAAGA
CTTTGCAGCTCCAGGCCAAGGAAAAGGAGTGCAGAGAACTGCATTGAGATTAGACAACCTCAGTGACGAGTATC
TCTCCTGCCTGCGTAAGCTGCAGCACTGTGAGAAAGAGCTGAACCAGAGCCAGCAGCTGCCTCCCAGAAGGCAAT
GTGGGCGATGGCTCCCAGTGCTGATGGTGGTGATTGCTGCAGCACTGGCAGTGTTCTGGCCAATAAAGACAACC
TGATGATCTGAATAATTTGTGACAACTGCCTTGGGTGAAAATCAGAAGCAAGCAACTCAGCGAAAAACTCAGAAG
GTTTGGGTACATTACAGCTTGGGTTTTCCAACCTGACTTAGGATTTCTGACTTTTTTATTAATTTCTTAACCTACTG
TAAATAAATTCACCTGACCAGATTGTTCTCTCA

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FIGURE 473

MISPDPRPSPGLARWAESYEAKCERRQEIRESRRCRPNVTTCRQVGKTLRIQQREQLQRARLQQFFRRRNLELEE
KGKAQHPQAREQGFSRRPGQVTGTSSEVFPAQHPPPSGICRDLSDDLSSQAGGLPPQDTPIKKPPKHHRGTQTKA
EGPTIKNDASQQTNYGVAVLDEIQLSDYLKEALQRELVLKQKMVILQDLLSTLIQASDSSWKGQLNEDKLKKGK
LRSLENQLYTCTQKYS PWGMKKVLEMEDQKNSYEQKAKESLQKVLEEKMNAEQQLQSTQQRSLALAEQKCEEWS
QYEALKEDWRTLGTQHRELESQ LHVLSKLGADSRDLQMNQALRFLENEHQQLQAKIECLQGDRDLCSLDTQDL
QDQLKRSEAEKLT LVTRVQQLQGLLQNSQLQEQEKLLTKKDQALPVWSPKSFPNEVEPEGTGKEKDWDLRDQL
QKKTLLQAKEKECRELHSELNLSDEYLSCLRKLQHCREELNQSQQLPARRQCGRWLPVLMVIAAALAVFLAN
KDNLMI

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FIGURE 474A

GGCTCCAGCTCCAGCAGCCATGGCGCCTTGTGTCAGCTCCTTTGTGGGTGGAGAAGAGCTCAGCCAACCTTGAT
GGAGCGTCGGTGAAGCAAGAGCTCAGAGGGGAGAGGGGCTGGCCTGGCATGACCGTCGCCAGTCCCCCACCTGG
CTGGGTGATGTCCCCCGCCCCGGTTCTGGGGCCCCCTTGGCAGTACC**ATCGAGCA**ACTGACAACCCTCCCACGGC
CTGGGGACCCTGGAGCCATGGAGCCATGGGCACTGCCACCTGGCATAGCTGGACTCCAGGTCGAGGGGGTGAAC
CTAGCAGTGCAGCCCCAAGCATCGCTGATACTCCTCCGGCAGCTCTGCAGCTTCAAGAACTGAGGTCTGAGGAGA
GTTCCAAGCCCCAAGGAGACGGGAGCTCCAGGCCCGTGGGGGAACTGACCCTGAAGGAGCAGAGGCTTGTCTGC
CCAGCCTGGGCCAGCAAGCATCCAGCTCTGGACCCGCTGCCAGAGGCCAGAGGATGAGGAAGTGGAGGCTTTCC
TGAAGGCCAAGCTGAATATGAGCTTTGGGGACAGGCCCAATCTGGAGCTGCTGAGGGCCCTGGGGGAGCTGCGGC
AGCGCTGTGCCATCCTTAAGGAGGAAAACCAGATGCTGAGGAAGAGCAGCTTCCCTGAGACAGAAGAGAAGGTGC
GGAGGCTGAAGCGGAAGAACGCCGAGCTGGCGGTCAATTGCCAAGCGCCTGGAGGAGAGGGCCCCGAAAGCTGCAGG
AAACGAACCTGAGGGTGGTGAGTGCCCCCTTGCCCCGGCCGGGGACCAGCTTGGAGTTGTGTGCGAAGGCCCTAG
CCCCCAGCGAGCCCCGGGACCTCAGTGAGACAGCCAGTGCAGTCTGGCCAAGGACAAGCAGATTGCTGCCTTGC
AGCGGGAGTGCAGGGAGCTGCAGGCCAGGCTCACTCTGGTGGGCAAGGAGGGTCCCCAGTGGCTCCACGTGCGGG
ACTTCGATCGGCTGCTGCGCAGTCCACGCGGAGGTGCTGCGGCTGCAGAGGCAGATCGCGCTGCGCAACCAGC
GGGAGACGCTCCCGCTCCCGCCGTCTGGCCCCCGGGCCCTGCTCTCCAGGCCAGAGCAGGGGCGCCTGCTCCCG
GGGCCCCGGGAGAGGCCACGCCCCAGGAGGATGCGGACAACCTACCCGTGATTCTAGGGGAGCCAGAGAAAAGAGC
AGAGGGTGCAGCAGCTGGAATCGGAGCTCAGCAAGAAGCGGAAGAAATGCGAGAGCCTGGAGCAGGAAGCCCCGA
AAAAGCAGAGGCGATGTGAGGAGCTGGAAGTGCAGCTGAGACAAGCGCAGAATGAGAATGCCCCGCTGGTGGAGG
AGAACTCCCGCTCAGTGGGAGAGCCACAGAGAAGGAGCAGGTGGAGTGGGAGAATGCGGAGCTGAGGGGCCAGC
TCCTGGGGGTGACACAGGAGAGGGACTCAGCCCTTCGAAGAGCCAGGGCCTGCAGAGCAAGCTGGAGAGCCTGG
AGCAAGTGTGAAGCACATGCGGGAGGTGGCCAGCGGCGGCAGCAGCTGGAGGTGGAGCATGAACAGGCTCGGC
TCAGCCTACGGGAGAAGCAGGAGGAGTCCGGAGACTGCAGCAGGCCAGGCTGAAGCCCAGAGGGAACATGAAG
GAGCCGTGCAGCTGCTGGAGTCTACCTTGGATTCCATGCAGGCCCGGGTTCGAGAGCTCGAAGAACAGTGCCGCA
GCCAAACCAGCAGTTACGCTCCTGGCACAAGAACTCCAGGCTTTCCGCTGCACCCGGGGCCCTTGGATCTGC
TCACATCTGCCCTGGACTGTGGGAGCCTTGGAGACTGCCACCACCCCCCTGCTGCTGCTCCATTCCCCAGCCTT
GCCGGGGTCTGGCCCCAAAGACCTTGACCTCCCGCCGGGCTCCCCCTGGGCGCTGCACCCCAAAGTCTTCCGAGC
CTGCCCCTGCCACTCTCACTGGGGTCCCTCGAAGGACAGCCAAGAAGGCAGAGTCTCTCTCAACTCCTCCACT
CCGAGTCCATCCACAACAGCCCCAAGTCATGCCCTACACCTGAGGTGGACACAGCCAGTGAGGTAGAGGAGCTGG
AGGCAGACAGTGTCTCCCTGCTCCCAGCTGCGCCAGAGGGCAGCCGGGGAGGAGCCAGGATCCAGGTCTTCTAG
CACGTTATAGCTACAACCCCTTTGAGGGTCCCAATGAGAATCCAGAAGCAGAGCTTCCGCTGCAGCTGGCGAGT
ACATCTACATCTATGGCAACATGGATGAGGATGGCTTTTTTGAAGGAGAGCTCATGGATGGCCGAAGGGGCTGG
TCCCTTCCAATTTGTAGAGCGTGTGTGCGATGATGACCTCCTGACCTCCCTCCCTCCAGAGCTGGCCGATTTGT
CCCACAGCTCAGGCCCTGAACTCAGTTTCTGAGTGTAGGTGGGGGTGGCAGCAGTAGCGGGGGCCAAAGCAGTG
TGGGAAGGAGCCAGCCCAGACCTGAGGAGGAGGATGCAGGGGACGAGCTCAGTCTGAGCCCATCACCGAGGGCC
TGGGCGAGCCTCCTGCCGTGCCTTACCCCCGCCGTCTGGTGGTCTCAAGCAGCTGGCCCCACAGCGTGGTGCTGG
CCTGGGAGCCGCTCCTGAGCAAGTGGAGCTACACGGCTTCCATATCTGTGTGAATGGGGAGCTGCGACAGGCC
TGGGGCCTGGGGGCCACCCAAGGCCGTGCTGGAGAACCTGGACCTGTGGGCCGGGGCCCTTCACATTTCTGTCC
AGGCCCTGACTAGCCGGGGCAGCTCTGACCCACTGCGCTGTTGCTTGGCGGTGGGTGCCCCGGGCCGGAGTGGTGC
CCAGCCAGCTGCGGGTCCATCGGTTGACAGCCACATCTGCTGAGATCACCTGGGTGCCCGGCAATAGCAACTTGG
CCCATGCCATCTACCTCAATGGGGAAGAAATGCCACCTGCCAGCCCCAGTACCTACTGGGGCCACCTTCTGCCACT
TACGGCCTGGCACACCCTATCAGGCCCAAGTGGAGGCTCAGTCCCACCCCAAGGGCCCTGGGAACCAGGCTGGG
AGAGGCTGGAGCAGCGGGCTGCCACCCTGCAGTTACCACACTCCCAGCAGGCCACCTGATGCCCTCTGGATG
TGCAGATCGAGCCTGGGGCCCTCCCTGGGATCTTGATCATCAGTTGGCTCCCAGTCACCATCGATGCTGCTGGCA
CATCCAACGGTGTCCGGGTACAGGCTATGCCATCTACGCTGATGGGCAGAAGATCATGGAGGTGGCCTCACCCA
CGGCAGGCAGTGTACTGGTGGAGTTGTCCAGCTGCAGCTGCTGCAGGTGTGTGCTGAGGTGGTCTGCGCACCA
TGTCGCCCCACGGGGAGTCGGCGGACTCCATCCCGGCTCCTTACTCCCGCCCTGGCTCCGGCCAGCCTGCCAG
CCCAGTCTCCTGCCCTCACCGCACCCAAGCCAGAGGCCAGAGCGCCCTTGCTTCAGCCTCCCCAGGGCCTG
GAGACCCAGCTCTCCTCTCCAGCACCTGCTCCCCCTTGGAACTCAAGAGCCTCCAGGAGCACCCCTGCAAGCC

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FIGURE 474B

CTTCCAGAGAGATGGCAAAGGGTCCCACGAGGACCCTCCAGCACCTTGCTCCCAGGAGGAGGCTGGGGCAGCAG
TGCTGGGCACCTCAGAGGAGAGGACAGCCAGCACATCTACCCTGGGTGAGAAGGACCCTGGCCCCGAGCTCCCT
CACTGGCCAAGCAGGAGGCCGAGTGGACTGCAGGAGAGGCCTGTCCGGCCTCCAGCTCCACCCAGGGAGCACGGG
CCCAGCAGGCGCCAAATACCGAGATGTGCCAAGGAGGAGACCCAGGGTCTGGGCTGAGGCCAGGGCTGAGAAGG
AGGACACAGCAGAGCTTGGGGTTCATCTGGTGAACCTCCCTCGTGGACCACGGCCGCAACTCAGACCTGTGACACA
TCCAGGAGGAAGAGGAAGAGGAGGAGGAGGAGGAAGAGGAGCTGGGTTCAGGACTTGCTCCTTCCAGAAGC
AGGTTGCTGGCAACAGCATCAGGGAGAATGGGGCCAAGTCCCAGCCCCGACCCCTTTTGTGAGACTGACAGCGATG
AGGAGATCTTGGAGCAGATCCTGGAGCTGCCCCCTCCAGCAGTTCTGTAGCAAGAAGCTCTTTAGCATCCCGGAGG
AGGAGGAAGAGGAAGAGGAGGACGAGGAGGAGGAGAAGTCTGGGGCAGGCTGTTCTTCCGAGACCCTGGCCCCG
CTGAACCTGCATTGCTGGGGCTGGGCTGTGACAGTGGTCAGCCCCGAAGACCTGGCCAGTGTCCCTTGTCTCCTG
AGTCCCTCAGGGCTGGAGACTGCCTGGAAGACATGCCTGGATTAGTTGGTGGAAAGCAGCCGGAGGAGAGGAGGGG
GCTCCCCTGAGAAGCCCCCAAGCCGACGGCGGCTCCAGATCCCCGAGAACACTGCAGCCGACTTCTCAGCAACA
ATGGGGCCCCAGGCCTCTGGACGACTGGGCCCCACACGGGAGAGGGGTGGCCTCCCCGTAATTGAGGGCCCCAGGA
CTGGACTAGAGGCTAGCGGGAGAGGCCGGCTGGGGCCTTCCCGAGGTGCTCCCGTGGCCGGGCGCTGGAGCCTG
GCCTGGCCAGCTGCCTTTCCCCCAAGTGCTTGGAAATCAGCATTGAATATGATTCCGAGGATGAGCAGGAGGCGG
GCAGCGGGGGCATCAGCATCACCAGCTCCTGCTACCCTGGAGATAGGGAGGCCTGGGGCACAGCAACTGTAGGAA
GGCCAGGGGGCCTCCGAAGGCCAATTCAGGCCCCAAGCCCTACCCACGCCTCCAGCCTGGGAGAAAGGGGAAC
CAGAGCGGAGAGGCCGAGTGCAGCGGGCAGAGCCAAGGAGCCACTCTCCGGGCAACAGAGACCGGAGAGGCCA
GAGGGCAGGACGGCTCTGGGCGGAGGGGCCCCAGAAGAGAGGTGTCCGAGTCTCAGGCCAAGCACTGCAGAGC
TAGTCCCTGCGAGGAGCCCTCAGAAACACTGGCTTACCAGCACCTACCCGTGAGGATCTTTGTGGCTCTGTTTG
ACTATGACCCCGTGTCAATGTGCGCCAATCCTGATGCTGGAGAAGAAGAGCTTCCCTTCCGAGAGGGTCCAGATCC
TGAAGGTGTTTGGGGACAAGGATGCCGATGGCTTCTACCAGGGCGAAGGTGGGGGCCGACAGGCTACATTCCCT
GCAACATGGTGGCTGAGGTGGCTGTGGACAGCCCTGCTGGGAGACAGCAACTGCTCCAGCGGGGTATTTGTCCC
CAGATATTCTCCTTGAGGGCTCAGGGAATGGTCCGTTTGTGTACTCCACAGCCACACAACCTGGGCCTCCTCCCA
AGCCCCGCCGCTCCAAGAAAGCTGAGTCGGAAGGCCCTGCCAGCCCTGTCCAGGCCCCCTAAGCTGGTCCCT
CTGCTGACCTGAAAGCTCCCCACTCCATGGTGGCTGCATTTGACTACAACCCCCAGGAGAGTTCCCCCAATATGG
ACGTGGAGGCAGAGCTGCCCTTCCGGGCAGGGGATGTCACTTACTGTGTTTGGGGGCATGGACGATGACGGTTTCT
ACTATGGGGAATTAAATGGACAAAGGGGCTGGTTCCATCCAACCTTCCCTGGAGGGCCCTGGGCCTGAGGCAGGCG
GCCTGGACAGGGAACCCAGGACACCCAGGCTGAGAGTCAGAGAACGAGGAGGAGAAGAGTCCAGTGCTAGATGG
AGATAGATATATGTAGAGAGAGCAACATGACTGGGGCTGCACCACACAAGGGTCCCCAGGGCCCCCAGGTGGGCC
TTGTACCCCCAGCTCTGGCAGCGCCCCCAGGATTGAACGTGGGGAGCCCCAGGGCAGAAGCGAGAAGGTGTGGGT
TTTTTTCCAAGGGGAAGCAGCTCCTCAGGAGGATGGGCTCTGGGAAGAAGGAGTGAAGCTGTGGCCCATCCTGCA
GGCAGAAGAGGCCCTGAGAGGCCCCAGATCACTGTTTTTGTGAGCAGGGAAGGCTCAGAATGGGCCAGAGCC
CCCGTTCTTTTGCCTTAACACTGTGGCATTGAGAGGGAATCAAAGAGCCTTGGTGAAGGTGAGAGCTAAATGGCT
CCTTAAGGATGAACTTTTTAGAGAAGCACCTTCTCCTACAGGAGGGGAACTGAGCCACAGTGAGTATGTAAC
TTGACCAAGGTCAGTGGCCAGGACTGGACCCAGGACCCTCGCGTCCCTGGTCCACCCACCTCGTCTACTAGTGTC
CCACAGTGCTGCGCTAGTCCCTTTTGCCACCCTTCCAGTCCCAGGACGGGCCCTGGAGGGAGAAAGGAGCCTGT
GCCCCCTGATGGCTCTGGCTGTCTGATCCTGTCTTCCCTCCCCCTGAAGGAAAGTTTGACTGGATTTTATTGGA
GCCCCATCTCCCCAGCGGGCAGGCGGGCGGAGCCTGTATATATGTATATACTCAGTGCCTCAGTTCAGCTTCCTC
CACCTCGCTTCCACTGCACAGGCCCAGGAAGGAGAAAGGCCAAGCCAAAGTGGGGCCCCACCTGCCCCCGTCGTG
CTCCATCCTTCCCTGCCGGGGCTGCTGGCCCCGTGAAGGTCCC GCCCCCAAAGACCTGGGGCCAGCGGGGCCG
AAAGCGGAGTTGGGTTTGCTTATTTTGCTCATTGGATTCAAGTTCTTTTGATAGTTTTTTTCTAACCCCTGTTG
GAGTCCAGGGGCTGGAGAAAAGGACAGATTTATGCAGCTATTTTCATACATTCCCTGTTCCAGAGTGGGGTAGGGG
TTTCCGCCGTTACCCGATCCAATCCATCCCCACCCTTTGAGGGGTGAGTGTGTCTTTGCATGTTTCTTTTGCT
GTGGTGGGAGATAGTTTGAAGTGAACCCCCACCTTGACCTTGGTCTCCAGGGGTGTGGAATGGTGGGGGAATTTGT
TAAAAAGACATTTTATTATAATAAAGTCTATTTTACAAAAA

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FIGURE 475

MEQLTTLP RP GD P GAME P WAL P T W H S W T P G R G G E P S S A A P S I A D T P P A A L Q L Q E L R S E E S S K P K G D G S S R P V G G T
D P E G A E A C L P S L G Q Q A S S S G P A C Q R P E D E E V E A F L K A K L N M S F G D R P N L E L L R A L G E L R Q R C A I L K E E N Q M L R K S
S F P E T E E K V R R L K R K N A E L A V I A K R L E E R A R K L Q E T N L R V S A P L P R P G T S L E L C R K A L A R Q R A R D L S E T A S A L L
A K D K Q I A A L Q R E C R E L Q A R L T L V G K E G P Q W L H V R D F D R L L R E S Q R E V L R L Q R Q I A L R N Q R E T L P L P P S W P P G P A L
Q A R A G A P A P G A P G E A T P Q E D A D N L P V I L G E P E K E Q R V Q Q L E S E L S K K R K K C E S L E Q E A R K K Q R R C E E L E L Q L R Q A
Q N E N A R L V E E N S R L S G R A T E K E Q V E W E N A E L R G Q L L G V T Q E R D S A L R K S Q G L Q S K L E S L E Q V L K H M R E V A Q R R Q Q
L E V E H E Q A R L S L R E K Q E E V R R L Q Q A Q A E A Q R E H E G A V Q L L E S T L D S M Q A R V R E L E E Q C R S Q T E Q F S L L A Q E L Q A F
R L H P G P L D L L T S A L D C G S L G D C P P P P C C C S I P Q P C R G S G P K D L D L P P G S P G R C T P K S S E P A P A T L T G V P R R T A K K
A E S L S N S S H S E S I H N S P K S C P T P E V D T A S E V E E L E A D S V S L L P A A P E G S R G G A R I Q V F L A R Y S Y N P F E G P N E N P E
A E L P L T A G E Y I Y I Y G N M D E D G F F E G E L M D G R R G L V P S N F V E R V S D D D L L T S L P P E L A D L S H S S G P E L S F L S V G G G
G S S S G G Q S S V G R S Q P R P E E D A G D E L S L S P S P E G L G E P P A V P Y P R R L V V L K Q L A H S V V L A W E P P P E Q V E L H G F H I
C V N G E L R Q A L G P G A P P K A V L E N L D L W A G P L H I S V Q A L T S R G S S D P L R C C L A V G A R A G V V P S Q L R V H R L T A T S A E I
T W V P G N S N L A H A I Y L N G E E C P P A S P S T Y W A T F C H L R P G T P Y Q A Q V E A Q L P P Q G P W E P G W E R L E Q R A A T L Q F T T L P
A G P P D A P L D V Q I E P G P S P G I L I I S W L P V T I D A A G T S N G V R V T G Y A I Y A D G Q K I M E V A S P T A G S V L V E L S Q L Q L L Q
V C R E V V R T M S P H G E S A D S I P A P I T P A L A P A S L P A R V S C P S P H P S P E A R A P L A S A S P G P G D P S S P L Q H P A P L G T Q
E P P G A P P A S P S R E M A K G S H E D P P A P C S Q E E A G A A V L G T S E E R T A S T S T L G E K D P G P A A P S L A K Q E A E W T A G E A C P
A S S T Q G A R A Q Q A P N T E M C Q G G D P G S G L R P R A E K E D T A E L G V H L V N S L V D H G R N S D L S D I Q E E E E E E E E E E E E E E L
G S R T C S F Q K Q V A G N S I R E N G A K S Q P D P F C E T D S D E E I L E Q I L E L P L Q Q F C S K K L F S I P E E E E E E E E E E E E E E K S G A
G C S S R D P G P P E P A L L G L G C D S G Q P R R P G Q C P L S P E S S R A G D C L E D M P G L V G G S S R R R G G G S P E K P P S R R R P P D P R
E H C S R L L S N N G P Q A S G R L G P T R E R G G L P V I E G P R T G L E A S G R G R L G P S R R C S R G R A L E P G L A S C L S P K C L E I S I E
Y D S E D E Q E A G S G G I S I T S S C Y P G D R E A W G T A T V G R P R G P P K A N S G P K P Y P R L P A W E K G E P E R R G R S A T G R A K E P L
S R A T E T G E A R G Q D G S G R R G P Q K R G V R V L R P S T A E L V P A R S P S E T L A Y Q H L P V R I F V A L F D Y D P V S M S P N P D A G E E
E L P F R E G Q I L K V F G D K D A D G F Y Q G E G G G R T G Y I P C N M V A E V A V D S P A G R Q Q L L Q R G Y L S P D I L L E G S G N G P F V Y S
T A H T T G P P P K P R R S K K A E S E G P A Q P C P G P P K L V P S A D L K A P H S M V A A F D Y N P Q E S S P N M D V E A E L P F R A G D V I T V
F G G M D D D G F Y Y G E L N G R G L V P S N F L E G P G P E A G G L D R E P R T P Q A E S Q R T R R R R V Q C

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FIGURE 476

ACCACTGCTGGCTTTTTGCTGTAGCTCCACATTCCTGTGCATTGAGGGGTAAACATTAGGCTGGGAAGATGACAA
AACTTGAAGAGCATCTGGAGGGAATTGTCAATATCTTCCACCAATACTCAGTTCGGAAGGGGCATTTGACACCC
TCTCTAAGGGTGAGCTGAAGCAGCTGCTTACAAAGGAGCTTGCAAACACCATCAAGAATATCAAAGATAAAGCTG
TCATTGATGAAATATTCCAAGGCCTGGATGCTAATCAAGATGAACAGGTCGACTTTCAAGAATTCATATCCCTGG
TAGCCATTGCGCTGAAGGCTGCCCATTACCACACCCACAAAGAGTAGGTAGCTCTCTGAAGGCTTTTTACCCAGC
AATGTCCTCAATGAGGGTCTTTTCTTCCCTCACCAAAACCCAGCCTTGCCCGTGGGGAGTAAGAGTTAATAAAC
ACACTCACGAAAAGTT

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FIGURE 477

MTKLEEHLEGIVNIFHQYSVRKGFDTLSKGELKQLLTKE
LANTIKNIKDKAVIDEIFQGLDANQDEQVDFQEFI
SLVAIALKAAHYHKE

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FIGURE 478

TGAATTCGGGAAGCGCCGCGAGCGGCGGATCCGGCGGGCTGCTGCAGCCCGGGCGGGCTGCCGAGAAGGAGGGAGGGG
AAACACAAAGCCGGCTACGCGCTGCGAGATAACAAGAGTAATCCACAGACTTAAAACATGAGCTCAGATGCCAGC
CAAGGCGTGATTACCACTCCTCCTCCTCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAT
GACCCAGAATACATTAGGGAGAGGAACATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAA
CGAGTTACTCAGATCCTGCAAAGTCCTGCCTTTGCGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAA
GGCCACAACCCAACTGGATTACTAGCATTACAGCAGATTGCAGATTACATCATGGCCAATTTCTTCTCGGGTTTT
TCTTCACCTCCTCTCAGTCTTGCGCATGGTCACACCTATCAATGACCTTCCTGGTGCAGATACATCCTCATATGTG
AAGGGAGAAAACTTACTCGCTGTAACTTGCCAGCCTGTACAGACTTGTAGACTTGTTTGGATGGGCACACCTG
GCAAATACCTATATCTCAGTAAGAATAAGTAAGGAGCAAGACCACATTATAATAATTCCCAGAGGCCTATCTTTT
TCTGAAGCTACAGCCTCCAATTTGGTGAAAGTCAATATAATAGGAGAAGTGTTGACCAGGGAAGTACCAATTTG
AAAATTGACCATACAGGATTCACTCCCCATGCTGCAATCTATTCAACACGTCCTGATGTAAAGTGTGTGATACAC
ATCCATACCCTTGCAACAGCAGCTGTATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTT
CTGGGAGATGTTGCCTATTATGACTACCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTT
CTGGGACCAAGTTGTAAGGTGCTGGTACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCT
TTTCATTATATTTTTAATGTGCAACTAGCCTGTGAGATTCAAGGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGAC
AATCTCCATGTACTGGACTTTTCAAGAAGTATAAAGCTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTG
AATATGGGTTCCCATCCAAAATGGAAGGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTG
GGGTATAGAACAGGCTATGCTTACAGGCATCCTCTCATTGAGAGAAGCCTAGGCACAAGAGTGATGTGGAAATC
CCAGCAACTGTGACTGCTTTTTCTTTTGAAGACGATACAATGCCACTCTCTCCTCTCCAAATACATGGCACAAGA
GGCAACAAGCGTGAAAAAACAAGATGGCTGAACCTACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCT
CGGAACGGAGAAACCAGTCCCCGAACCAAATCACGTGGATGAAAGCAGAAGACTCATCTAAAGTTAGTGGTGGA
ACACCTATCCAAATTGAAGATCCAAATCAGTTTGTTCCTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGA
AATAAGATTGCGGAACAAAATCGATATGACTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGCTGGAATTGTT
GTGGATAAGCCACCTTCTACTATGCAATTTGAAGATGATGATCATGGCCCACCAGCTCCTCCTAACCCATTTAGT
CATCTCACAGAAGGAGAACTTGAAGAGTATAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGAAAACCAT
GAGCTGTTTTCCAAGAGCTTCATCTCCATGGAAGTGCTGTGATGGTAGTAAATGGCAAGGATGATATGCATGAT
GTTGAAGATGAGCTTGCTAAGCGAGTGAGTAGGTTAAGCACAAAGTACAACCATAGAAAACATCGAGATTACTATT
AAGTCTCCAGAGAAAATCGAAGAAGTCCTGTACCTGAAGGCTCCCCTTCAAAATCGCCATCCAAGAAAAAGAAG
AAATTCGCACTCCTTCTTTTCTGAAAAAGAACAAAAAAGGAGAAAGTTGAGGCCTAAATAAAGTCTTTTTAT
AATTATTATTATAACAATGTGACATTGCACATCTAAATACCACATTTAAGTTGATCATTAAATATGCAATGGTAGA
TCAGATTGGGGGATGTAGCAAACCTGGACTTTAAGAACTGGAAAGAGGTTTTACAAAAGAAAACTTCAAGATTCA
TCTCTCATTTTATATGTCCAGAAATGGCTTTGGAATTTAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATG
AAGTTTATTATT

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FIGURE 479

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRVQTQILQSPAFREDLECLI
QEQMKKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFSPHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLLGDVAYYDYQGSLEEQEERIQLQKVLGSPCKVLVLRNHGVVALG
ETLEAFHYIFNVQLACEIQVQALAGAGGVDNLHVLDLQKYKAFTYTVAAAGGGGVNMGSHPKWKVGEIEFEGLM
RTLDNLGYRTGYAYRHPLIREKPRHKSDEIPATVTAFSFEDDTMPLSPLQIHGTRGNKREKTRWLNPNNTYMKV
NVPEESRNGETSPRTKITWMKAEDSSKVSGGTPIQIEDPNQFVPLNTNPNEVLEKRNKIREQONRYDLKTAGPQSQ
LLAGIVVDKPPSTMQFEDDDHGPPAPPNPFSLTEGELEEYKRTIERKQQGLEENHELFSKSFISMEVPVMVNG
KDDMHDVEDELAKRVSRLSTSTTIENTIETIKSPEKIEEVLSPGSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 480

CTTTCGGTCCCCTTGCTTCGTCTTCGCTTTTCTTTCTACTTATTCTTATCTGTGTCTTTTCGCTTTGTTTGCCTCT
CCGTCTGTTTTCCCTCAGGGCCCCCTTCTTTCCTCGACCTTTTCAAATCGCAAATATGGCGCCGGAGCGGCTGCG
GAGCCGGGCGCCCTCCGCCTTCAAGTTGCGGGGCTTGCTGCTCCGTGGTGAAGCTATTAAGTACCTCACAGAAGC
TCTTCAGTCTATCAGTGAATTAGAGCTTGAAGATAAACTGGAAAAGATAATTAATGCAGTTGAGAAGCAACCCTT
GTCATCAAACATGATTGAACGATCTGTGGTGGAAAGCAGCAGTCCAGGAATGCAGTCAGTCTGTTGATGAAACTAT
AGAGCAGTTTTTCAATATCATAGGAGCATTGATATTCCACGCTTTGTGTACAATTCAGAAAGAAAAAATTTCT
TCCTCTGTTAATGACCAACCACCCTGCACCAAATTTATTTGGAACACCAAGAGATAAAGCAGAGATGTTTCGTGA
GCGATATAACATTTTGCACCAGAGGACCCACAGGCATGAATTATTTACTCCTCCGGTGATAGGTTCTCACCTGA
TGAAAGCGGAAGCAAATTCAGCTTAAACAATAGAAACCTTATTGGGTAGTACAACCAAAATCGGAGATGCGAT
TGTTCTTGGAATGATAACGCAGTTAAAAGAGGGGAAAATTTTTCTGGAAGATCCTACTGGAACAGTCCAACCTAGA
CCTTAGTAAAGCTCAGTTCCATAGTGGTTTATACACAGAGGCATGCTTTGTCTTAGCAGAAGGTTGGTTTGAAGA
TCAAGTGTTTCATGTCAATGCCTTTGGATTTCACCCACTGAGCCCTCTAGTACTACTAGGGCATACTATGGAAA
TATTAATTTTTTTGGAGGTCCTTCTAATACATCTGTGAAGACTTCTGCAAACTAAAACAGCTAGAAGAGGAGAA
TAAAGATGCTATGTTTGTGTTTTATCTGATGTTTGGTTGGACCAGGTGGAAGTATTGGAAAACTTCGCATAAT
GTTTGCTGGTTATTACACAGCACCTCCAACCTGCTTTATCTGTGTGGTAATTTTTTCATCTGCACCATATGGAAA
AAATCAAGTTCAAGCTTTGAAAGATTCCCTAAAACTTTGGCAGATATAATATGTGAATACCCAGATATTCACCA
AAGTCGTTTTGTGTTTGTACCTGGTCCAGAGGATCCTGGATTGGTTCCATCTTACCAAGGCCACCACTTGCTGA
AAGCATCACTAATGAATTCAGACAAAGGTACCATTTTTCAGTTTTTACTACTAATCCTTGCAGAAATTCAGTACTG
TACACAGGAAATTACTGTCTTCCGTGAAGACTTAGTAAATAAAATGTGCAGAACTGCGTCCGTTTTCTTAGCAG
CAATTTGGCTATTTCCTAATCACTTTGTAAAGACTATCTTATCCCAAGGACATCTGACTCCCCTACCTCTTTATGT
CTGCCCAGTGTATTGGGCATATGACTATGCTTTGAGAGTGTATCCTGTGCCCGATCTACTTGTCAATGCAGACAA
ATATGATCCTTTCACTACGACAAATACCGAATGCCTCTGCATAAACCCCTGGCTCTTTTCCAAGAAGTGGAATTTT
ATTCAAAGTTTTTTATCCTTCTAATAAGACAGTAGAAGATAGCAAACCTTCAAGGCTTTTTGAGATTCTTAAAGATC
ATCTGAAGAAAATTCATCAGTTTTCTGCTTAACTCTATATCTTATGTGATTCTGATATTACAATAAAATTATGGT
AAACTTT

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FIGURE 481

MAPERLRSRAPSAFKLRGLLLRGEAIKYLTEALQSI SELELEDKLEKI INAVEKQPLSSNMIERSVVEAAVQECS
QSVDETHVFNIIIGAFDIPRFVYNSEKFKFLP LLMTNHPAPNLFGTPRDKAEMFRERYTILHQRTHRHELFTPP
VIGSHPDSESGSKFQLKT IETLLGSTTKIGDAIVLGMITQLKEGKFFLEDPTGTVQLDLSKAQFHSGLYTEACFVL
AEGWFEDQVFHVNAFGFPPT EPSSTTRAYYGNINFFGGPSNTSVKTS AKLKQLEENKDAMFVFLSDVWLDQVEV
LEKLRIMFAGYSPAPPTCFILCGNFSSAPYGKNQVQALKDSLKTLADI ICEYPD IHQSRFVFP GPEDPGFGSIL
PRPPLAESITNEFRQRVF SVFTTNPCRIQYCTQEITVFREDLVNKMCRNCVRFP SSNLAIPNHFVKTI LSQGHL
TPLPLYVCPVYWAYDYALRVYPVPDLLVIADKYDPFTTTNTECLCINPGSFPRSGFSFKVFYPSNKTVEDSKLQG
F

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FIGURE 482

GGCGCGGGGACGCGGGTTTTCTGCCCTCAGGCCCTGCCCTGCTCTACTCTGCGCTCTCTGCCCCGCGCCGCCGCCGCC
TCAGCCTCGGCCCTGCGCTGCGCGCCCCGGCCCGTGCTGCCATGCCCTGCCGCCCGCGAAGCCCGCCGAGGCATCA
GAGCCGCTGCGACGGTGACGCCAGCCCGCCGTCCCCCGCGCGATGGAGCCTGGGACGGAAGCGCAGAGCCGACGG
CAGGCGCTGGAGGCCCGAAGACGCCGAGGAGGCAGAGCACC GCGCGCCGAGCGCAGACCCGAGAGCTTTACCAC
TCCTGAAGGCCCTAAACCCCGTTCCAGATGCTCTGACTGGGCAAGTGCAGTTGAAGAAGATGAAATGAGGACCAG
AGTTAACAAAGAAATGGCAAGATATAAAAGGAACTCCTCATCAATGACTTTGGAAGAGAGAGAAAATCATCATC
AGGAAGTTCTGATTCAAAGGAGTCTATGTCTACTGTGCCGGCTGACTTTGAGACAGATGAAAGTGTCTAATGAG
GAGACAGAAGCAGATCAACTATGGGAAGAACAATTGCCTACGATCGTTATATTAAAGAAGTCCCAAGACACCT
TCGACAACCTGGCATTTCATCCCAAGACCCCTAATAAATTTAAGAAGTATAGTCGACGTTTCATGGGACCAGCAAAT
CAAACCTCTGGAAGGTGGCTCTGCATTTTTTGGGATCCTCCAGCGGAAGAAGGATGTGATTTGCAAGAAATACACCC
TGTAGACCTTGAATCTGCAGAAAGCAGCTCCGAGCCCCAGACCAGCTCTCAGGATGACTTTGATGTGTACTCTGG
CACACCCACCAAGGTGAGACACATGGACAGTCAAGTGGAGGATGAGTTTGATTTGGAAGCTTGTTTAACTGAACC
CTTGAGAGACTTCTCAGCCATGAGCTTAACTGCCCCCTGGCGGCCAGGAAGAGAAACAGCTCCTCCCCGACTAGGT
GGAAGGCTGGCCAGGCACCAAGCATGTGTGTGCACCTGTACCTGGTGGTTTTCTCTGTTAGCAGTCCATTAGCTCA
TGCTGAATTATTTTTGCCTTACTTTCTTAAGAAACATTAATTTTTATGTATAGTGAGTATATTTTGCATGTTTTAA
ATTGTAAATGGAGCTAAGTCCAAGAAAGTACTTGAAGCTCTCTTCCAGCGAGCTTAATTGCGTAATCCCTGTTGT
CCTCCAGGGTAAGCTGACACGTCTACATAACTGGTTTTCCACAGGCATCTTCAGTTATTGCTTGTGAGGTGGACT
GTTTTGGATTTAACCATGTAATCCATGGGACCAATTGAGAGTCAGCTACTTTTATAGGCATCAAAGTATTCTCAG
ACACCTTTAATATCTTTATGGAACTTAATTTTTGGCCCTTTTATCAATATGTCATAACAGCATTCCTGAAGTCAGA
CATTGTTAAATTGAGCTATTAACTAATGAGTTTTATGTAAGTTATATGGTCTTAATTTGGTACTTGTAATAGC
ACTAGTTAGACTCTTTAGAATACTCCAAGAGTTAGGGCAGCAGAGTGGAGCGATTTAGAAAGAACATTTTAAAC
AATCAGTTAATTTACCATGTAAATTTGCTGTAAATGATAATGTGTACAGATTTTCTGTTCAAATATTCAATTGTA
AACTTCTTGTTAAGACTGTTACGTTTCTATTGCTTTTGTATGGGATATTGCAAAAATAAAAAGGAAAGAACCCTC
AAAAAAAAAAAAAAAAAAAA

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FIGURE 483

MACRPRSPPRHQSRCDGDASPPSPARWSLGRKRRADGRRWRPEDAEAEHRGAERRPESFTTPEGPKPRSRCSDW
ASAVEEDEMRTVRNKEMARYKRKLLINDFGREKRSSSGSSDSKESMSTVPADFETDESVLMMRQKQINYGKNTIA
YDRYIKEVPRHLRQPGIHPKTPNKFKKYSRRSWDQQIKLWKVALHFWDPPAEEGCDLQEIHVPDLESAESSSEPQ
TSSQDDFDVYSGTPTKVRHMDSQVEDEFDLEACLTEPLRDFSAMS

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FIGURE 484

ATTTAAATTCTGCAGCTCAGAGATTACACACAGAAGTCTGGACACAATTCAGAAGAGCCACCCAGAAGGAGACAAC
AATGTCCCTGCTACCCGTGCCATACACAGAGGCTGCCTCTTTGTCTACTGGTTCTACTGTGACAATCAAAGGGCG
ACCACTTGCCTGTTTCTTGAATGAACCATATCTGCAGGTGGATTTCCACACTGAGATGAAGGAGGAATCAGACAT
TGTCTTCCATTTCCAAGTGTGCTTTGGTCGTCGTGTGGTCATGAACAGCCGTGAGTATGGGGCCTGGAAGCAGCA
GGTGAATCCAAGAATATGCCCTTTTCAAGGATGGCCAAGAATTTGAACTGAGCATCTCAGTGCTGCCAGATAAGTA
CCAGGTAATGGTCAATGGCCAATCCTCTTACACCTTTGACCATAGAATCAAGCCTGAGGCTGTGAAGATGGTGCA
AGTGTGGAGAGATATCTCCCTGACCAAATTTAATGTCAGCTATTTAAAGAGATTAACCAGACTTCATGTTGCCAAG
GAATCCCTGTCTCTACGTGAACTTGGGATTCCAAAGCCAGCTAACAGCATGATCTTTTCTCACTTCAATCCTTAC
TCCTGCTCATTAAAACTTAATCAAACCTTCAAAAAAAAAA

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FIGURE 485

MSLLPVPYTEAASLSTGSTVTIKGRPLACFLNEPYLQVDFHTEMKEESDIVFHFQVCFGRRVVMNSREYGAWKQQ
VESKNMPFQDGQEFELSISVLPDKYQVMVNGQSSYTFDHRIKPEAVKMVQVWRDISLTKFNVSYLKR

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FIGURE 486

CTCGGCGCGCGCTTGGGGCGAGGCTCGGCGGGCGCGGACGCGCAGC**ATGG**CGGTGGAGGACGAGGGGGCTCCGGGT
CTTCCAGAGCGTGAAGATCAAGATCGGTGAAGCCAAAAACCTTCCCTCTTACCCGGGGCCGAGCAAGATGAGGGA
TTGCTACTGCACGGTGAACCTGGACCAGGAGGAGGTTTTTCAGGACCAAAATTGTGGAAAAGTCACTCTGCCCGTT
TTACGGAGAAGACTTTTACTGTGAAATTCTTCGGAGCTTTTCGTACCTGTCTTCTACATTTTCGATAGAGACGT
TTTCCGGAGGGATTCCATCATAGGGAAGGTGGCCATCCAGAAGGAGGACTTGCAGAAGTACCACAACAGGGACAC
CTGGTTCCAGCTGCAGCACGTGGACGCTGACTCGGAAGTGCAGGGCAAAGTGCACCTGGAGCTGCGGCTGAGCGA
GGTCATCACAGACACTGGGGTCTGTCTGCCACAAGCTCGCCACACGCATCGTCGAGTGCCAGGGCCTCCCCATCGT
GAATGGGCAATGTGACCCCTACGCCACCGTGACGCTGGCAGGACCCTTCAGATCAGAAGCAAAGAAGACGAAAGT
GAAGAGGAAGACCAACAATCCCCAGTTTCGATGAAGTGTTTTATTTTGAGGTGACCCGGCCCTGTAGCTACAGCAA
GAAGTCCCACCTTTGACTTTGAGGAGGAAGACGTGGACAAGCTCGAAATCAGAGTTGACCTCTGGAATGCCAGTAA
CCTGAAGTTTGAGAGATGAATTCCTGGGAGAACTAAGGATCCCGTTGAAAGTCTGCGGCAGTCCAGCTCCTACGA
GGCGTGGTACTTCTCCAGCCCCGGGACAATGGTAGCAAGAGCCTAAAGCCAGACGACCTGGGCTCCCTGCGGCT
GAACGTGGTATACACGGAAGACCACGTGTTTTCTTCTGACTATTACAGCCCTCTGCGGGACCTGCTGTTGAAGTC
TGGCGATGTGGAGCCCGTGTTCAGCGTCTGCGGGCCACATCCTGGGCGAGGTTTGCCGGGAGAAGCAGGAGGCGGC
CGTCCCGCTGGTGGGCTCTTCTTACACTATGGCAGGGTGGTGCCATTTCATCAGTGCCATCGCCAGCGCGGAGGT
GAAGCGGACCCAGGACCCCAACACCATCTTCCGAGGAACTCACTGGCGTCCAAGTGCATTGACGAGACCATGAA
GCTGGCGGGGATGCATTACCTGCATGTACCCCTGAAGCCCCGCCATCGAGGAGATATGCCAGAGCCACAAACCTG
TGAAATCGACCCTGTGAAGTTGAAAGACGGAGAAAACCTTGAAAACAACATGGAGAACCTACGGCAGTATGTGGA
CCGCGTCTTCCACGCCATCACCGAGTCTGGGGTGAGCTGCCCCGACCGTCATGTGTGACATCTTCTTCTCCCTCCG
GGAGGCGGGCGGCAAGCGCTTCCAGGATGACCCGGACGTCAGGTACACTGCAGTGAGCAGCTTCATCTTCTGAG
GTTCTTTGCGCCCGCCATTCTCTCCCCAACCTCTTCCAGCTCACGCCGCACCACACGGACCCCCAGACGTCCAG
GACGCTGACATTGATCTCCAAGACCGTTCAGACCCTCGGCAGCCTGTCCAAGTCCAAATCTGCGAGTTTTAAGGA
GTCTTACATGGCTACATTTTATGAATTCTTCAATGAGCAGAAATATGCTGATGCGGTGAAGAACTTCTTGATCT
GATTTCTGCTCCTCGGGGAGAAGAGACCCCAAGAGTGTTGAGCAGCCCATCGTGCTTAAAGAAGGGTTTCATGATCAA
GAGGGCCCAAGGACGGAAGCGCTTTGGGATGAAGAATTTTAAGAAGAGATGGTTTCGTTTGACCAACCATGAATT
TACCTACCACAAAAGCAAAGGGGACCAGCCTCTCTACAGCATTCCTATCGAGAACATCCTGGCAGTGGAGAAGCT
GGAGGAGGAGTCTTTCAAAATGAAAAACATGTTCCAGGTCATCCAGCCAGAGCGTGCGCTGTACATCCAGGCCAA
CAACTGCGTGAGGAGGCAAGGACTGGATCGACATTCTACCAAAGTGAGCCAGTGCAACCAGAAGCGCCTCACCGT
CTACCACCCGTCCGCTACCTGAGCGGCCACTGGCTGTGTAGGGCGCCATCCGACTCGGCTCCGGGCTGCTC
GCCCTGCACTGGCGGCCTCCAGCCAACATCCAGCTGGACATTGATGGGGACCGTGAGACGGAGCGTATCTACTC
CCTCTTCAACTTGTACATGAGCAAGCTGGAGAAGATGCAGGAGGCCTGTGGGAGCAAATCTGTGTATGACGGCCC
GGAGCAGGAGGAGTATTCGACGTTTCGTCATTGACGACCCCCAGGAGACCTACAAGACGCTAAAGCAAGTCATCCG
CTGGGTTGGGGCTTTGGAGCAGGAGCACGCCAGTATAAGAGGGACAAGTTCAAGAAGACGAAATATGGAAGCCA
GGAGCACCCCATCGGAGACAAGAGCTTCCAGAACTACATCCGGCAGCAGTCCGAGACCTCCACTCATTCCATT**TA**
AAGTCTGCGGGACGCGCCC

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FIGURE 487

MAVEDEGLRVFQSVKIKIGEAKNLPSYPGPSKMRDCYCTVNLDQEEVFRTKIVEKSLCPFYGEDFYCEIPRSFRH
LSFYIFDRDVFRRDSIIGKVAIQKEDLQKYHNRDTWFQLQHVDADSEVQGKVHLELRLSEVITDTGVVCHKLATR
IVECQGLPIVNGQCDPYATVTLAGPFRSEAKKTKVKRKTNNPQFDEVFYFEVTRPCSYSKKSHDFEEDVDKLE
IRVDLWNASNLFKGDEFGLGELRIPLKVLQRSSSYEAWYFLQPRDNGSKSLKPDDLGSRLNVVYTEDHVFSSDYY
SPLRDLKLSADVEPVASASAAHILGEVCREKQEAAPLVRLFLHYGRVVPFISAIASAEVKRTQDPNTIFRGNSL
ASKCIDETMKLAGMHYLVTLKPAIEEICQSHKPCEIDPVKLDGENLENNMENLRQYVDRVFHAITESGVSCPT
VMCDIFFSLREAAAKRFQDDPDVRYTAVSSFIFLRFFAPAILSPNLFQLTPHHTDPQTSRTLTLISKTVQTLGSL
SKSKSASFKE SYMATFYEFFNEQKYADAVKNFLDLISSGRDPKSVEQPIVLKEGFMIKRAQGRKRFGMKNFKK
RWFRLTNHEFTYHKSKGDQPLYSIPIENILAVEKLEESFKMKNMFQVIQPERALYIQANNCVEAKDWIDILTKV
SQCNQKRLTVYHP SAYLSGHWLCCRAPSDSAPGCSFCTGGLPANIQLDIDGDRETERIYSLFNLYMSKLEKMQEA
CGSKSVYDGPEQEEYSTFVIDDPQETYKTLKQVIRWVGALQEQEHAQYKRDKFKKTKYGSQEHPIGDKSFQNYIRQ
QSETSTHSI

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FIGURE 488

GCAGTGTCTCCCGGTGCGCGTGGAGGTCGGTCGCTCAGAGCTGCTGGGCGCAGTTTCTCCGCCTGCTGCTTCGG
CGCGGCTGTATCGGCGAGCGAGCGAGTTCGCGCGAGTTCTCGGTGGCGCTCCCCCTTCCTTTCAGTCTCCACGGA
CTGGCCCCCTCGTCTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTTCGGTTGGGCCGATTCCCCG
CCCGCTTCCTCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAGATGAACCAGATTATGA
TGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCATTTTCAAGCCTGATAGT
TTTGGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCAACCACCTGTCTTCATACCCTGACGAAGTGC
ACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCCAGAAATACATTTGCCACCAACAGAGTAGCCAA
ATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTTGAGGATGAAAATTTTATTGAGTCTTCTGTTGCCA
AATTAAATGCCCTGAGGAAAAGTGCCAGTTCGTGTGATGTTGACTTCAGGTCTGTGGCCATGAAATGTTAGCAC
ACAGAGCAGTGCTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGTGATCCTCATGGAATTT
CTCACGTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTGAATTATGCCTACACTGCTCAGTTGA
AAGCAGATAAGAATTGTAAAGATGTTTATTCTGCAGCAAAAAGCTGAAGATGGATCGAGTAAAGCAGGTTTGTG
GTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCGAAATTTTGCAAGTTGTATGGGAGACT
CCCGTTTGTGAATAAGGTTGATGCTTATATTAGGAGCATTTGTTACAAATTTCTGAAGAGGAGGAGTTTCTTA
AGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGCTTGCCAGCAATGGCAAATTATATACAA
AGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAGCTGATGGAAGAGGTTCAAA
CCTTGTAAGTACTCAGCTGATCACAAGCTGCTTGATGGGAACCTACTAGATGGACAGGCTGAGGTGTTTGGCAGTG
ATGATGACCACATTCAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAGCAGATAAGTAGCAGTTCAA
CTGGATGCTCTCTTCTCCAAATGCTACAGTACAAAGCCCTAAGCATGAGTGGAATAATCGTTGCTTCAGAAAAAGA
CTTCAAATAACACTTACTTGTGCTGGCTGTGCTGGATGGTATATTCTGTGTCATTTTCTTCATGGGAGAAACA
GCCCCACAGAGCTCACCAACAAGTACTCCAAAACCTAAGTAAGAGTTTAAGCTTTGAGATGCAACAAGATGAGCTAA
TCGAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAGATGAATGGCAAACCTCATAG
CTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCGAATGCTATAATCCACATACAGATCACTGGTCCT
TTCTTGCTCCCATGAGAACACCAAGAGCCGATTTCAAATGGCTGTACTCATGGGCCAGCTCTATGTGGTAGGTG
GATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATAGATGACTGGATTCTGTTC
CAGAATTGAGAACTAACCGTTGTAATGCAGGAGTGTGTGCTCTGAATGGAAGTTATACATCGTTGGTGGCTCTG
ATCCATATGGTCAAAAAGGACTGAAAAATTGTGATGTATTTGATCCTGTAACAAAGTTGTGGACAAGCTGTGCCC
CTCTTAACATTTCGGAGACACCAAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTACATAATCGGAGGTGCAGAAT
CTTGGAATTGTCTGAACACAGTAGAACGATACAAATCCTGAAAATAATACCTGGACTTTAATTGCACCCATGAATG
TGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAACCTGTTTGTATGTGGTGGCTTTGATGGTTCTCATG
CCATCAGTTGTGTGGAATGTATGATCCAAC TAGAAATGAATGGAAGATGATGGGAAATATGACTTCACCAAGGA
GCAATGCTGGGATTGCAACTGTAGGGAACACCATTTATGCAGTGGGAGGATTCGATGGCAATGAATTTCTGAATA
CGGTGGAAGTCTATAACCTTGAGTCAAATGAATGGAGCCCTATACAAAGATTTTCCAGTTTTAACAAATTTAAG
ACCTCTCAAACCTAACAGGCTTAGTGATGTAATTATGGTTAGTAGAGGTACACTTGTGAATAAAGAGGGTGGGTG
GGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGCATATTGCATACTATTAAACATGCTGTACATACTTTTG
GGTTATTTGGAAAGGAATGCAAAGATGAAGGTCTGTTTTGTGTACTTTTAAGACTTTGGTTATTTTACTTTTTG
GAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCTCTCCTCCACATTTGTTTTGCCAATT
TGCACATTAATGACTCTTCCCCTCGT

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FIGURE 489

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKE
DDLNP EAVEVLLNYAYTAQLKADKNCKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLLN
KVDA YIQEHL LQISEEEEF LKL PRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYYS
ADHKLLDGNLLDGQAEVFGSDDDH IQFVQKKPPRENGHKQISSSSTGCLSSPNATVQSPKHEWKIVASEKTSNNT
YLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKSLSFEMQQDELIEKPMSPMQYARSGLGTAEMNGKLIAAGGY
NREECLRTVECYNPHTDHSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVPELRT
NRCNAGVCALNGKLYIVGGSDPYGQKGLKNCDVFDVPTKLWTSCAPLNIRRHQS AVCELGGYLYIIGGAESWNCL
NTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHAISCVEMYDPTRNEWKMMGNMTSPRSNAGI
ATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPYTKIFQF

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FIGURE 490A

GGCATGGAACCTAAAGACTAGAGGCGGTTGTGTGAGTCAGGAAGAGGGGCCAGATATCTGAGTGTTCTCTTTAG
TTTCTTCAATTGCAGATAATATGGTGTCTAATTTTATGTTGTTTCAGGAAAGACAGTGGTTCCTGACTCAGGAAGA
CAGTCTCAGAAACATCTGGAATGATATTGAGCTGCTAACAAATGATGATACCGGAAGTGGGTACCTGAGTGTGG
TTCAAGAAAAGAACATGGAAGTCTTTATATCAAGTAGATTTGCTAGTGAAGATCTCTTCTGAAAAGGCCTCATT
AAATCCAAAGATACAGGCATGCAGCTTAAGTGATGGGTTTATTATTGTAGCCGACCAATCAGTGATATTGCTTGA
CAGTATTTGTAGATCACTTCAATTGCATCTTGTCTTTGATACTGAAGTGGATGTAGTTGGCCTTTGTCAAGAAGG
AAAGTTTCTTTTGGTTGGCGAGAGAAGTGGCAACCTACATCTTATTCATGTAACATCAAAACAAACACTACTCAC
TAATGCATTTGTTTCAGAAAGCTAACGATGAAAATCGGCGGACTTACCAGAACTTGTTCATTGAGAAGGATGGTTC
AAATGAAGGTACCTATTATATGCTACTTCTTACATACAGTGGATTTTTTTGTATTACAAACCTTCAGCTTTTAAA
AATTCAACAAGCAATTGAGAATGTAGACTTCAGTACAGCAAAAAAGTTACAAGGACAAATCAAGTCCAGTTTTAT
TTCTACTGAAAAATTATCATACTCTTGGTTGCTCAGTCTTGTGGCTGGAGATTAGCAAGTGAAGTTCCTGTGAT
AATTGGGGGAACCGGTAATTGTGCATTCTCAAAATGGGAACCGAGATTCTTCCAAGAAAGGAATGACAGTTAAGAA
CCTTATTGATGCAGAGATTATTAAAGGTGCAAGAAGTTCAGCTGATAGACAATCTACTTTTTGTCTTGATAC
TGATAACGTGCTGAGTTTATGGGATATTTACACTCTAAGTCTGTATGGAAGTGGCCTCTCTTCACGTAGAAGA
GTTTCTTCTTACTACAGAAGCAGACTCTCCTTCATCAGTCACGTGGCAAGGAATTACAAATCTCAAATTAATAGC
TCTGACAGCTTCAGCTAATAAGAAGATGAAAAACCTCATGGTTTATTTCATTACCTACAATGGAAATACTATATTC
TTTGGAAGTATCTAGTGTCTTCTCTGCTGCTCAAACAGGAATTAGCACAGATACCATATACCTTTTAGAAGGAGT
TTGCAAAAATGATCCAAAATTGTCTGAAGACTCAGTCTCTGTGTAGTACTCAGATGTCTTACGGAAGCTTTACC
AGAAAACAGATTGAGTCGGTTACTTCACAAACACAGATTTGCTGAAGCTGAGAGTTTTGCCATTTCAGTTTGGACT
AGATGTTGAGCTTGTTCACAAGGTCAAGTCAAATCATATATTGGAGAACTGGCATTGAGTTCTGTGGATGCCAG
TGAACAGACCGAATGGCAACAACCTTGTAGACGACGCTAAGGAAAACTACATAAGATCCAGGATGATGAATTTGT
GGTGAATTACTGCCTGAAAGCTCAGTGGATAACCTATGAAACCACTCAAGAGATGCTGAATTATGCCAAAACCG
GCTTTTGAAGAAAGAAGATAAACTGCTCTCATTATTTCTGATGGCTTGAAAGAGGTGCTAAGAGCTCATGCAAA
ATTGACTACTTTTTATGGAGCATTGGGACCAGAAAAATTCAGTGGCAGTTCTTGGATTGAATTTCTAAATAATGA
AGATGATCTTAAAGATATTTTTTTACAGCTAAAAGAAGGAAACCTTGTTTGTGCACAGTATCTTTGGCTTCGACA
TCGGGCAAACTTTGAAAGCAGATTGATGTGAAAATGCTGGAGAGCTTGCTCAACTCAATGTCTGCATCAGTCTC
TTTGCAAAAGCTGTGTCCATGGTTTAAAAATGATGTGATTCCATTTGTAAGAAGGACTGTGCCTGAAGGACAGAT
AATCTTGCAAAATGGTTGGAACAAGCAGCCAGGAACCTTGAATTAAGTGAAGGCAAAATGGCCAGAAAATGG
ACTTCAATTGGCAGAGATATTTTTTACAGCAGAAAAAACAGACGAGTTGGGATTGGCATCTTCTTGGCATTGGAT
TTCCTTGAAAAGATTATCAGAACACAGAGGAAGTATGTCAGCTAAGGACTTTGGTAAATAACTTGCGAGAGTTGAT
CACGTTGCATAGGAAGTACAACCTGCAAATTAGCCCTCTCTGATTTTGAGAAGGAAAAATACAACCACCATAGTGT
CCGAATGTTTGATAAAGTGTGGCCCCAGAGCTTATTCCTCCATCTTAGAGAAGTTTATAAGAGTTTACATGAG
AGAACATGACTTGCAAGAGGAGGAACCTTCTTGTCTGTACATAGAGGATTACTGAATAGATGCAGCTCAAAGTC
CACATCACTCTTTGAAACAGCATGGGAAGCAAAGGCCATGGCAGTAATAGCGTGTATCTGACACGGACCTCAT
ATTTGATGCCGTGCTCAAGATCATGTATGCGGCAGTGGTTTCTTGGAGTGCAGCTGTGGAGCAACTGGTGAAACA
GCACCTGGAAATGGACCATCCCAAAGTCAAGTTATTACAGGAAAGTTACAACTAATGGAGATGAAAAAATTTT
ACGAGGCTATGGAATAAGAGAGGTAAATCTCTTAAACAAGGAAATAATGAGAGTGGTTAGATACATTCTCAAACA
AGATGTCCCATCTTCTTTAGAAGATGCTTTAAAGGTAGCCCAAGCGTTTATGTTATCTGATGATGAGATCTACAG
TCTAAGAATTATTGACCTGATTGATAGAGAACAGGGTGAAGACTGTCTCCTTCTGTTGAAGTCTTTGCCTCCTGC
TGAAGCTGAGAAAAGTGCAGAAAGAGTCATCATATGGGCACGACTGGCATTACAAGAAGAGCCAGATCATTCTAA
AGAGGGCAAGGCCTGGAGAATGTCTGTAGCGAAGACATCCGTGGACATTCTTAAGATACTATGTGACATTACAGAA
AGACAATCTGCAGAAGAAGGACGAATGTGAAGAAATGTTGAAACTATTTAAAGAGGTTGCTAGCTTACAGGAGAA
CTTTGAGGTCTTTCTTTCATTTGAAGATTATAGCAATAGTTCCCTGGTAGCAGATCTCCGTGAGCAGCACATTAA
AGCTCACGAAGTTGCACAGGCGAAACACAAACCTGGGAGCACCCAGAGCCCATAGCTGCTGAGGTGAGGAGCCC
AAGCATGGAATCAAAGCTGCACAGACAGGCACTGGCCCTGCAGATGTCCAAACAAGAGCTGGAGGCAGAGCTGAC
CTTGAGAGCCTTAAAGATGGGAACATCAAAACAGCACTGAAAAAATGCAGCGACTTGTTTAAAGTATCACTGCAA
TGCTGACACTGGGAAATTGCTATTTCTGACATGTGAGAAGCTTTGTGAGATGTTGGCTGATAATGTCCAGTGAC
AGTGCTGTGGGACTGAATCTTCTTCCATGATACATGATCTAGCAAGCCAAGCTGCCACCATTTCAGTCCAGA

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FIGURE 490B

TTTTTACTAGATGCTTTAGAACTATGTAAACATACTTTAATGGCTGTAGAGCTTTCCAGACAATGCCAAATGGA
TGACTGTGGAATCCTCATGAAAGCTTCTTTTGGGACACATAAAGATCCATATGAAGAGTGGTCTTACAGTGACTT
CTTCAGTGAAGATGGAATTGTTCTTGAGTCACAGATGGTGCTTCCAGTGATTTATGAACTGATTTTCATCTCTTGT
GCCTCTAGCTGAAAGCAAGAGATATCCCTTGGAGTCTACCAGTTTGCCATACTGCTCCCTTAATGAAGGAGATGG
CCTTGTTTTACCTGTTATAAAATTCCATCTCTGCCCTGCTTCAGAATCTTCAGGAATCTAGCCAGTGGGAGCTAGC
CCTAAGATTTGTGGTTGGTTTCATTTGGTACCTGTCTTCAGCACTCTGTGTCAAACCTTCATGAATGCCACTTTGAG
TGAAAAGTTATTTGGAGAGACTACATTAGTTAAATCAAGGCATGTTGTTATGGAATTGAAAGAAAAAGCTGTTAT
ATTTATCAGGGAAAAATGCTACAACACTACTGCACAAAGTATTTAATTGTCGCTTGGTAGATCTTGACCTGGCGTT
GGGTTACTGCACCTCTCTTACCTCAAAAAGATGTGTTTGAAAATCTCTGGAAGCTCATAGATAAAGCATGGCAGAA
TTACGACAAAATCTTGGCAATATCTCTGGTGGGCTCTGAGCTGGCAAGTCTCTATCAGGAAATAGAAATGGGGCT
TAAGTTCCGTGAACTCAGTACTGATGCCCAGTGGGGCATTTCGTCTTGGTAAACTTGGTATTTCTTTCAACCAGT
TTTCAGGCAACATTTTCTCACCAAGAAAGACCTCATTAAAGCTCTTGTGGAGAATATAGATATGGACACAAGCCT
CATTTTGGAAATATTGCAGCACATTTTCAGTTGGACTGCGATGCAGTTCTTCAGCTCTTCATTGAAACGCTGCTCCA
CAACACAAATGCCGGCCAAGGCCAGGGAGATGCAAGCATGGACTCTGCAAAGCGGGGCATCCCAAACTCCTGGC
CAAAGCCCTTGAGATGGTTCTTTACTGACGAGCACAAAAGATTTGGTCATCAGTCTTAGTGGAATACTACATAA
GTTGGATCCTTATGACTATGAAATGATTGAAGTTGTCTTGAAAGTTATAGAACGAGCTGATGAAAAGATAACCAA
TATTAATATTAATCAGGCATTGAGTATTCTGAAACATTTGAAGTCATACAGAAGAATTTCTCCTCCCGTGGATCT
AGAATATCAGTATATGTTGGAACATGTCATAACTTTGCCATCAGCTGCCCAAACTAGACTGCCTTTTCACCTGAT
ATTCTTTGGCACAGCACAGAACTTCTGGAATACTCTCTACAGAACTCAGTGAAGAATCTTTCCCAACATTGCT
CTTAATTTGAAAATTAATGAAGTTCTCTCTGGACACTCTGTACGTGTCTACAGCAAAACACGTTTTCGAAAAAA
ACTGAAGCCAAAGCTCCTGAAGTTAACACAAGCTAAATCCTCAACACTGATTAACAAGGAAATAACTAAGATCAC
GCAGACCATCGAATCCTGCTTACTCTCTATAGTCAACCCAGAGTGGGCTGTAGCTATTGCCATCAGCCTTGCCCA
GGATATCCCTGAAGGTTCTTCAAGATATCTGCTTTGAAATTCTGCCTTTATTTAGCTGAGAGATGGCTACAGAA
TATCCCATCGCAGGACGAAAAACGTGAAAAAGCCGAGGCTTTGTTGAAGAAGCTTCATATCCAGTACCGGCGATC
GGGCACAGAAGCTGTGCTCATAGCCACAAGCTGAACACTGAGGAATATTTAAGAGTGATCGGAAAGCCAGCACA
TCTTATTGTGAGTCTCTACGAACATCCTAGCATCAATCAAAGAATTCAGAATTCATCTGGCACAGATTATCCTGA
TATTCATGCAGCAGCTAAAGAAATAGCCGAAGTCAATGAAATTAATTTGAAAAAGCTCTGGGACATGTTGTTGGA
AAAATGGCTATGCCCTTCAACAAAACCTGGTGAAAAACCATCAGAATTATTTGAACTTCAAGAAGATGAAGCCCT
ACGAAGAGTGCAGTATCTCCTCCTGTCTCGTCCAATTGATTATAGTTCAAGAATGCTGTTTGTATTGCAACATC
AACTACAACCACATTAGGTATGCATCAGTTAACTTTTGCCATAGAACTCGAGCTCTTCAGTGTCTCTTCTATTT
GGCTGACAAGGAAACTATAGAATCTCTCTTTAAAAAACCATTGAAGAAGTGAATCTTATTTGAGATGTATAAC
TTTTCTGGCATCATTTGAGACTTTGAATATCCCCATCACATATGAATTATTTGCAGCAGTCCTAAGAAGGAAT
GATTAAGGGTCTGTGGAATAACACAGCCACGAGTCCATGGCAGTAAGATTGGTGACTGAGCTGTGTTTGAATA
CAAAATCTATGACCTGCAGCTTTGGAATGGACTCTTGCAAAAGCTTCTGGGCTTCAATATGATTCCTTATCTAAG
GAAAGTTTTAAAGCCATCTCCAGTATCCATTCTTTATGGCAGGTTCCCTACTTCAGCAAAGCGTGGCAGCGTGT
GATACAGATAACCACTGCTTTCAGCCTCTTGTCCTTTAAGTCTGATCAGCTGTCAGATTGTTCTGAGAGTCTCAT
CGCTGTCTCGAATGTCCAGTCTCAGGTGATCTTGACCTGATCGGAGTCGCCAGGCAGTATATCCAGTTAGAACT
TCCGGCTTTTGCATTAGCTTGTCTGATGCTCATGCCCCACTCAGAGAAAAGACACCAGCAAATTAAGAATTTTCT
GGGTTCTGTGACCCCTCAGGTTATTTTAAAGCAATTGGAAGAGCATATGAACACGGGGCCAGCTAGCAGGATTTTC
ACATCAAATTAGAAGTCTGATTTTGAATAATATCATCAATAAGAAGGAGTTTGGGATTTTGGCAAAGACCAAATA
CTTTCAAATGTTGAAGATGCATGCGATGAATACCAACAATATCACTGAGCTAGTGAACATTTTGGCAAATGACTT
AAGTTTAGATGAAGCTTCAGTCTTGATAACTGAATATTCAAAGCACTGCGGGAAACCTGTGCCTCCAGACACTGC
TCCCTGTGAAATCTGAAGATGTTTCTTAGTGGATTATCGTAAATCACTGAACCTTTTTTTTCAAGAAGGACAAGA
ATTTTGGAGTCTGCTATTAATGGACCATATTTATTACAGTTTTTAAATGTACAATCTCTGTATTATAGCTATTT
GTCTAACATTACCCACATGTAATAAATAAAACAATATGAGC

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FIGURE 491

MWNDIELLTNDTSGYLSVGSRKEHGTALYQVDLLVKISSEKASLNPKIQACSLSDGFIIVADQSVILLDSICR
SLQLHLVFDTEVDVVGLCQEGKFLLVGERSGNLHLIHVTSKQTLLTNAFVQKANDENRRITYQNLVIEKDGSNEG
YYMLLLTYSGFFCITNLQLLKIQQAIEENVDFSTAKKLQGGIKSSFISTENYHTLGCLSLVAGDLASEVPVIIGGT
GNCAFSKWEPDSSKKGMTVKNLIDAEI IKGAKKFQLIDNLLFVLDTDNVLSLWDIYTLTPVWNWPSLHVEEFLLT
TEADSPSSVTWQGITNLKLIALTASANKKMKNLMVYSLPTMEILYSLEVSSVSSSLVQTGISTDTIYLLEGVCKND
PKLSEDSVSVLVLRCLTEALPENRLSRLHKKHRAEAESEFAIQFGLDVELVYKVKSNHILEKLALSSVDASEQTE
WQQLVDDAKENLHKIQDDEFVNYCLKAQWITYETTQEMLNIAKTRLLKKEDKTALIYSDGLKEVLRHAHAKLTTF
YGAFGPEKFSGSSWIEFLNNEDDLKIDIFLQKEGNLVCAYLWLRHRANFESRFDVKMLESLLNSMSASVSLQKL
CPWFKNDVIPFVRRTVPEGQIILAKWLEQAARNLELTDKANWPENGLQLAEIFFTAECTDELGLASSWHWISLKD
YQNTTEVCQLRTLNNLRELITLHRKYNCKLALSDFEKENTTTIVFRMFDKVLAPELIPSILEKFI RVMREHDL
QEEELLLLYIEDLLNRCSSKSTSLFETAWEAKAMAVIACLSDTDLIFDAVLKIMYAAVVPWSAAVEQLVKQHLEM
DHPKVLLQESYKLMEMKKLLRGYGIREVNNLKEIMRVVRYILKQDVPSSLEDALKVAQAFMLSDDEIYSLRII
DLIDREQGEDCLLLLKSLPPAEAEKTAERVIIWARLALQEEPDSKEGKAWRMSVAKTSVDILKILCDIQKDNLQ
KKDECEEMKLKFKEVASIQENFEVFLSFEDYSNSSLVADLREQHIKAHEVAQAKHKPGSTPEPIAAEVRSPSMES
KLHRQALALQMSKQEELEAELTLRALKDGNIKTALKKCSDLFKYHCNADTGKLLFLTCQKLCQMLADNVPVTVPG
LNLPSMIHDLASQAATICSDFLLDALELCKHTLMAVELSRQCQMDDCGILMKASFETHKDPYEEWSYSDFFSED
GIVLESQMVLPVIYELISSLVPLAESKRYPLESTSLPYCSLNEGDLVLPVINSISALLQNLQESSQWELALRFV
VGSFGTCLQHSVSNFMNATLSEKLFGETTLVKSRHVVMELKEKAVIFIRENATTLHKVFNCRLVDLDLALGYCT
LLPQKDVFNELWKLIDKAWQNYDKILAIISLVGSELASLYQEIEMGLKFRELSTDAQWGIRLGKLGISFQPVFRQH
FLTCKDLIKALVENIDMTSLILEYCSTFQLDCDAVLQLF IETLLHNTNAGQGQGDASMDSAKRRHPKLLAKALE
MVEPLLSTKDLVISLSGILHKLPDYDYEMIEVVLKVIERADEKITNININQALSILKHLKSYRRISPPVDLEYQY
MLEHVITLPSAAQTRLPPHLLIFFGTAQNFWKILSTELSEESFPTLLLSKLMKFSLDTLVSTAKHVFEKKLKP
LLKLTQAKSSSTLINKEITKITQTIESCILLSIVNPEWAVAIASLAQDIPEGFSFKISALKFCLYLAERWLQNIPSQ
DEKREKAEALLKKLHIQYRRSGTEAVLIAHKLNTTEYLRVIGKPAHLIVSLYEHP SINQRIQNSSGTDYPDIAHA
AKEIAEVNEINLEKVWDMLEKWLCPSTKPGKEKPSSELFQEDALRRVQYLLLSRPIDYSSRMLFVFATSTTTT
LGMHQLTFAHRTRALQCLFYADKETIESLFFKKPIEEVKSYLRCITFLASFETLNIPITYELFCSSPKEGMIKGL
WKNHSHESMAVRLVTELCLEYKIYDLQLWNGLLQKLLGFNMIPYLRKVLK

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FIGURE 492

GAGAGACTGGATGGACCCACAAGGGTGACAGCCCAGGCGGACCGATCTTCCCATCCCACATCCTCCGGCGCGATG
CCAAAAAGAGGCTGACGGCAACTGGGCCTTCTGCAGAGAAAGACCTCCGCTTCACTGCCCCGGCTGGTCCCAAGG
GTCAGGAAGATGGATTTCATACCTGCTGATGTGGGGACTGCTCACGTTCATCATGGTGCCTGGCTGCCAGGCAGAG
CTCTGTGACGATGACCCGCCAGAGATCCACACGCCACATTCAAAGCCATGGCCTACAAGGAAGGAACCATGTTG
AACTGTGAATGCAAGAGAGGTTTCCGCAGAATAAAAAGCGGGTCACTCTATATGCTCTGTACAGGAACTCTAGC
CACTCGTCTGGGACAACCAATGTCAATGCACAAGCTCTGCCACTCGGAACACAACGAAACAAGTGACACCTCAA
CCTGAAGAACAGAAAGAAAGGAAAACACAGAAATGCAAAGTCCAATGCAGCCAGTGGACCAAGCGAGCCTTCCA
GGTCACTGCAGGGAACCTCCACCATGGGAAAATGAAGCCACAGAGAGAATTTATCATTTCGTGGTGGGGCAGATG
GTTTATTATCAGTGCCTCCAGGGATACAGGGCTCTACACAGAGGTCTGCTGAGAGCGTCTGAAAATGACCCAC
GGGAAGACAAGGTGGACCCAGCCCCAGCTCATATGCACAGGTGAAATGGAGACCAGTCAGTTTCCAGGTGAAGAG
AAGCCTCAGGCAAGCCCCGAAGGCCGTCTGAGAGTGAGACTTCCTGCCTCGTCACAACAACAGATTTTCAAATA
CAGACAGAAATGGCTGCAACCATGGAGACGTCCATATTTACAACAGAGTACCAGGTAGCAGTGGCCGGCTGTGTT
TTCTGCTGATCAGCGTCTCTCTCTGAGTGGGCTCACCTGGCAGCGGAGACAGAGGAAGAGTAGAAGAACAATC
TAGAAAAACCAAAAGAACAAGAATTTCTTGTAAGAAGCCGGGAACAGACAACAGAAGTCATGAAGCCCAAGTGAA
ATCAAAGGTGCTAAATGGTCGCCAGGAGACATCCGTTGTGCTTGCCTGCGTTTTGGAAGCTCTGAAGTCACATC
ACAGGACACGGGGCAGTGGCAACCTTGTCTCTATGCCAGCTCAGTCCCATCAGAGAGCGAGCGCTACCCACTTCT
AAATAGCAATTTGCGCGTTGAAGAGGAAGGGCAAAACCACTAGAACTCTCCATCTTATTTTCATGTATATGTGTT
CATTAAAGCATGAATGGTATGGAACCTCTCTCCACCCTATATGTAGTATAAAGAAAAGTAGGTTTACATTCATCTC
ATTCCAACCTTCCCAGTTCAGGAGTCCCAAGGAAAGCCCCAGCACTAACGTAAATACACAACACACACTCTACC
CTATACAACCTGGACATTGTCTGCGTGGTTCTTTCTCAGCCGCTTCTGACTGCTGATTCTCCCGTTCACGTTGCC
TAATAAACATCCTTCAAGAACTCTGGGCTGCTACCCAGAAATCATTTTACCCTTGGCTCAATCCTCTAAGCTAAC
CCCCTTCTACTGAGCCTTCAGTCTTGAATTTCTAAAAAACAGAGGCCATGGCAGAATAATCTTTGGGTAACTTCA
AAACGGGGCAGCCAAACCCATGAGGCAATGTGAGGAACAGAAGGATGAATGAGGTCCCAGGCAGAGAATCATACT
TAGCAAAGTTTTACCTGTGCGTTACTAATTGGCCTCTTTAAGAGTTAGTTTCTTTGGGATTGCTATGAATGATAC
CCTGAATTTGGCCTGCACTAATTTGATGTTTACAGGTGGACACACAAGGTGCAAATCAATGCGTACGTTTCTCTGA
GAAGTGTCTAAAAACACCAAAAAGGGATCCGTACATTCAATGTTTATGCAAGGAAGGAAAGAAAGGAAGTGA
AGAGGGAGAAGGGATGGAGGTCACACTGGTAGAACGTAACCACGGAAAAGAGCGCATCAGGCCTGGCACGGTGGC
TCAGGCCTATAACCCAGCTCCCTAGGAGACCAAGGCGGGAGCATCTCTTGAGGCCAGGAGTTTGAGACCAGCCT
GGGCAGCATAGCAAGACACATCCCTACAAAAAATTAGAAATTGGCTGGATGTGGTGGCATACGCCTGTAGTCCTA
GCCACTCAGGAGGCTGAGGCAGGAGGATTGCTTGAGCCCAGGAGTTCGAGGCTGCAGTCAGTCATGATGGCACCA
CTGCACTCCAGCCTGGGCAACAGAGCAAGATCCTGTCTTTAAGGAAAAAAGACAAGG

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FIGURE 493

MDSYLLMWGLLTFIMVPGCQAE LCDDDPPEIPHATFKAMAYKEGTMLNCECKRGFRRIKSGSLYMLCTGNSSHSS
WDNQCQCTSSATRNTTKQVTPQPEEQKERKTTEMQSPMQPVDQASLPGHCREPPWENEATERIYHFVVGQMVYY
QCVQGYRALHRGPAESVCKMTHGKTRWTQPQLICTGEMETSQFPGEEKPQASPEGRPESETSCLVTTTDFQIQTE
MAATMETSIFTTEYQVAVAGCVFLLISVLLLSGLTWQRRQRKSRRTI

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FIGURE 494

AGCTCAGCAGGACCTCAGCCATGAGACTTCTCATCCTGGCCCTCCTTGGCATCTGCTCTCTCACTGCATACATTG
TGGAAGGTGTAGGGAGTGAAGTCTCAGATAAGAGGACCTGTGTGAGCCTCACTACCCAGCGACTGCCGGTTAGCA
GAATCAAGACCTACACCATCACGGAAGGCTCCTTGAGAGCAGTAATTTTTATTACCAAACGTGGCCTAAAAGTCT
GTGCTGATCCACAAGCCACATGGGTGAGAGACGTGGTCAGGAGCATGGACAGGAAATCCAACACCAGAAATAACA
TGATCCAGACCAAGCCAACAGGAACCCAGCAATCGACCAATACAGCTGTGACTCTGACTGGCTTAGTAGTCTCTGG
CACCTGTCCGTCTCCAGCCAGCCAGCTCATTTCACTTTACACGCTCATGGACTGAGTTTATACTCACCTTTTAT
GAAAGCACTGCATGAATAAAATTATTCCTTTGTATTTTTACTTTTAAATGTCTTCTGTATTCACTTATATGTTCT
AATTAATAAATTATTTATTATTAAGAATAGTTCCTTAGTCTATTCAATTATTTAGGGAAAGGTAGTGTATCATT
GTTGTTTGATTTCTGACCTTGACCTCTCTTTGATGGTAACCATAATGGAAGAGATTCTGGCTAGTGTCTATCAG
AGGTGAAAGCTATATCAATCTCTCTTAGAGTCCAGCTTGTAATGGTTCTTTACACATCAGTCACAAGTTACAGCT
GTGACAATGGCAACAATTTGAGATGTATTTCAACTTGTCTCTATAATAGAATTCTGTTTATAGAATAAGGGAGAA
AATAATCCAGTCTTCACTGGGTTCCTATTCTGAGGGTCCACTACTCAAAAATTTGCTTCACTCAATTTTTTTCAC
CTCTTTGTGTTTTATTTTGGTGTCTATTAAAGGAATAAAATGACACAACCTTGTCCTTTTTTGTCCCATTAGCA
AAAATTAGAATTTTGGTATAAAGAACTTTATTCAAGTAAAAATCAATACCCTTTGAATTGGACAATAATCTCAC
TACCTTATTAGGATTTCTGTATTTGCCATTACGCTAGTTATCATGCATGTTATGCTTTACTGCGAATAAGCTTTT
AATGCTCCAAATGCTGACCCATGCAATATTTCTCATGTGATCACAATTTGCAGTAACTTTTAATTAAATGCTC
ATCTGGTAACTCAACACCCAG

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FIGURE 495

MRLILALLGICSLTAYIVEGVGSEVSDKRTCVSLLTQRLPVSRIKTYTITEGSLRAVIFITKRGLKVCADFPQAT
WVRDVVRSMRKSNTNRNNMIQTKPTGTQQSTNTAVTLTG

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FIGURE 496A

ATTGCTAAGCCATCCTTCAGACAGAGAGGGAGCGGCTGCAAGAGGTAATGAGAGATGCAAGAAAGAAGCTGAAA
AAATTTACTACTTTGGAGATTGTGCTCAGTGTTCTTCTGCTTGTGTTGTTTATCATCAGTATTGTTCTAATTGTG
CTTTTAGCCAAAGAGTCACTGAAATCAACAGCCCCAGATCCTGGGACAACCTGGTACCCCGGATCCTGGGACAAC
GGTACCCAGATCCTGGAACAACCTGGTACCACACATGCTAGGACAACGGGTCCCCAGATCCTGGAACAACCTGGT
ACCACTCCTGTTTCTGCTGAATGTCCAGTGGTAAATGAATTGGAACGAATTAATTGCATCCCTGACCAGCCGCCA
ACAAAGGCCACATGTGACCAACGTGGCTGTTGCTGGAATCCCCAGGGAGCTGTAAGTGTTCCTGGTGCTACTAT
TCCAAGAATCATAGCTACCATGTAGAGGGCAACCTTGTCAACACAAATGCAGGATTCACAGCCCGGTTGAAAAAT
CTGCCCTTCTCACCAGTGTTTGGGAAGCAATGTTGACAATGTTCTTCTCACAGCAGAATATCAGACATCTAATCGT
TTCCACTTTAAGTTGACTGACCAAAACCAATAACAGGTTTGAAGTGCCCCACGAACACGTGCAGTCTTTCAGTGGA
AATGCTGCTGCTTCTTTGACCTACCAAGTTGAATCTCCAGACAGCCATTTAGCATCAAAGTGACCAGAAGAAGC
AACAAATCGTGTTTTGTTTGACTCGAGCATTGGGCCCCCTACTGTTTGCTGACCAGTTCCTTGACGCTCTCCACTCGA
CTGCCCTAGCACTAACGTGTATGGCCTGGGAGAGCATGTGCACCAGCAGTATCGGCATGATATGAATTGGAAGACC
TGGCCCATATTTAACAGAGACACAACCTCCCAATGGAAACGGAACCTAATTTGTATGGTGCGCAGACATTCTTCTTG
TGCTTTGAAGATGCTAGTGGATTGTCCTTTGGGGTGTTTCTGATGAACAGCAATGCCATGGAGGTTGTCCTTCAG
CCTGCGCCAGCCATCACTTACCGCACCATTTGGGGCATTCTCGACTTCTATGTGTTCTTGGGAAACACTCCAGAG
CAAGTTGTTCAAGAATATCTAGAGCTCATTGGGCGGCCAGCCCTTCCCTCCTACTGGGCGCTTGGATTTACCTC
AGTCGTTACGAATATGGAACCTTAGACAACATGAGGGAAGTCGTGGAGAGAAATCGCGCAGCACAGCTCCCTTAT
GATGTTACAGCATGCTGATATTGATTATATGGATGAGAGAAGGGACTTCACTTATGATTAGTGGATTTTAAAGGC
TTCCCTGAATTTGTCAACGAGTTACACAATAATGGACAGAAGCTTGTCAATCATGTGGATCCAGCCATCTCCAAC
AACTCTTCTCAAGTAAACCCTATGGCCCATATGACAGGGGTTCCGATATGAAGATATGGGTGAATAGTTTCAGAT
GGAGTGACTCCACTCATTGGGGAGGCTTGGCCTGGACAAACTGTGTTTCTGATTATACCAATCCCAACTGTGCT
GTTTGGTGACAAAGGAATTTGAGCTTTTTCACAATCAAGTAGAGTTTGATGGAATCTGGATTGATATGAATGAA
GTCTCCAACCTTTGTTGATGGTTCGGTCTCAGGATGTTCCACAAACAACCTAAATAATCCCCATTCACTCCAGA
ATCCTGGATGGGTACCTGTTCTGCAAGACTCTCTGTATGGATGCAGTGCAGCACTGGGGCAAGCAGTATGACATT
CACAATCTGTATGGCTACTCCATGGCGGTGCGCCACAGCAGAAGCTGCCAAGACTGTGTTCCCTAATAAGAGAAGC
TTCATTCTGACCCGTTCTACCTTTGCGGGCTCTGGCAAGTTTGCAGCACATTGGTTAGGAGACAACACTGCCACC
TGGGATGACCTGAGATGGTCCATCCCTGGCGTGCTTGAGTTCAACCTTTTTGGCATCCCAATGGTGGGTCTTGAC
ATATGTGGCTTTGCTTTGGACACCCCTGAGGAGCTCTGTAGGCGGTGGATGCAGTTGGGTGCATTTTATCCGTTT
TCTAGAAATCACAATGGCCAAGGCTACAAGGACCAGGATCCTGCCTCCTTTGGAGCTGACTCCCTGCTGTTGAAT
TCCTCCAGGCACTACCTTAACATCCGCTATACTCTATTGCCCTACCTATACACCCTTTTCTTCCGTGCTCACAGC
CGAGGGGACACGGTGGCCAGGCCCTTTTGCATGAGTTCTACGAGGACAACAGCACTTGGGATGTGCACCAACAG
TTCTTATGGGGGCCCCGGCCTCCTCATCACTCCAGTTCTGGATGAAGGTGCAGAGAAAGCGATGGCATATGTGCCT
GATGCTGTCTGGTATGACTACGAGACTGGGAGCCAAGTGAGATGGAGGAAGCAAAAAGTCGAGATGGAACCTTCCT
GGAGACAAAATTGGACTTCACCTTCGAGGAGGCTACATCTTCCCCACACAGCAGCCAAATACAACCACTCTGGCC
AGTCGAAAAGAACCTCTTGGTCTTATCATTGCCCTAGATGAGAACAAAAGCAAAAAGGAGAACCTTTTCTGGGAT
GATGGGGAAACGAAGGATACTGTGGCCAATAAAGTGTATCTTTTATGTGAGTTTCTGTCACTCAAACCGCTTG
GAGGTGAATATTTACAATCAACCTACAAGGACCCCAATAATTTAGCATTTAATGAGATTAAAATTCTTGGGACG
GAGGAACCTAGCAATGTTACAGTGAAACACAATGGTGTCCCAAGTCAGACTTCTCCTACAGTCACTTATGATTCT
AACCTGAAGGTTGCCATTATCACAGATATTGATCTTCTCCTGGGAGAAGCATAACAGTGGAATGGAGCATAAAG
ATAAGGGATGAAGAAAAAATAGACTGTTACCCTGATGAGAATGGTGCTTCTGCCGAAAACCTGCACTGCCCGTGGC
TGTATCTGGGAGGCATCCAATTCTTCTGGAGTCCCTTTTTGCTATTTTGTCAACGACCTATACTCTGTCACTGAT
GTTCACTATAATTCCCATGGGGCCACAGCTGACATCTCCTTAAAGTCTTCCGTTTATGCCAATGCCTTCCCCTCC
ACACCCGTGAACCCCTTCGCCTGGATGTCACTTACCATAAGAATGAAATGCCGCAAGTTCAAGATTTATGATCCC
AACAGAATCGGTATGAAGTTCCAGTCCCTCTGAACATAACCAGCATGCCATCCAGCACCCCTGAGGGTCAACTC
TATGATGTGCTCATTAAGAAGAATCCATTTGGGATTGAAATTCGCCGGAAGAGTATAGGCACTATAATTTGGGAC
TCTCAGTCTCTTGGCTTTACCTTCAGTGACATGTTTATCCGCATCTCCACCCGCCTTCCCTCCAAGTACCTCTAT
GGCTTCGGGGAAACTGAGCACAGGTCCTATAGGAGAGACTTGGAGTGGCACACTTGGGGGATGTTCTCCCGAGAC
CAGCCCCCAGGGTACAAGAAGAATTCCTATGGTGTCCACCCCTACTACATGGGGCTGGAGGAGGACGGCAGTGCC

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FIGURE 496B

CATGGAGTGCTCCTGCTGAACAGCAATGCCATGGATGTGACGTTCCAGCCCCCTGCCTGCCTTGACATACCGCACC
ACAGGGGGGAGTTCTGGACTTTTATGTGTTCTTGGGGCCGACTCCAGAGCTTGTACCCAGCAGTACACTGAGTTG
ATTGGCCGGCCTGTGATGGTACCTTACTGGTCTTTGGGGTTCAGCTGTGTGCTATGGCTACCAGAATGACTCT
GAGATCGCCAGCTTGTATGATGAGATGGTGGCTGCCAGATCCCTTATGATGTGCAGTACTCAGACATCGACTAC
ATGGAGCGGCAGCTGGACTTCACCCTCAGCCCCAAGTTTGCTGGGTTTCAGCTCTGATCAATCGCATGAAGGCT
GATGGGATGCGGGTCATCCTCATTCTGGATCCAGCCATTCTGGCAATGAGACACAGCCTTATCCTGCCTTCACT
CGGGGCGTGGAGGATGACGTCTTCATCAAATACCCAAATGATGGAGACATTGTCTGGGGAAAGGTCTGGCCTGAT
TTTCTGATGTTGTTGTGAATGGGTCTCTAGACTGGGACAGCCAAGTGGAGCTATATCGAGCTTATGTGGCCTTC
CCAGACTTTTCCGTAATTCAACTGCCAAGTGGTGGAAAGAGGGAAATAGAAGAACTATACAACAATCCACAGAAT
CCAGAGAGGAGCTTGAAGTTTGATGGCATGTGGATTGATATGAATGAACCATCAAGCTTCGTGAATGGGGCAGTT
TCTCCAGGCTGCAGGGACGCCCTCTCTGAACCACCCTCCCTACATGCCACATTGGAGTCCAGGGACAGGGGCGCTG
AGCAGCAAGACCCCTTGTATGGAGAGTCAGCAGATCCTCCAGACGGCTCCCTGGTGCAGCACTACAACGTGCAC
AACCTGTATGGGTGGTCCCAGACCAGACCCACATACGAAGCCGTGCAGGAGGTGACGGGACAGCGAGGGGTCGTC
ATCACCCGCTCCACATTTCCCTCTTCTGGCCGCTGGGCAGGACATTGGCTGGGAGACAACACGGCCGCATGGGAT
CAGCTGAAGAAGTCTATCATTGGCATGACGGAGTTTACGCTCTTCGGCATATCCTATACGGGAGCAGATATCTGT
GGGTTCTTTCAAGATGCTGAATATGAGATGTGTGTTGCTGGATGCAGCTGGGGGCGCTTTTACCCCTTCTCAAGA
AACCACAACACCATTGGGACCAGGAGACAAGACCCCTGTGTCTCTGGGATGTTGCTTTTGTGAATATTTCCAGAACT
GTCTGCAGACCAGATGCACCCTGTTGCCATATCTGTATACCTTGATGCATAAGGCCACACGGAGGGCGTCACT
GTTGTGCGGCCCTCTGCTCCATGAATTTGTGTGACAGCAGGTGACATGGGACATAGACAGTCAGTTCTGTCTGGGC
CCAGCCTTCTGGTTCAGCCCTGTCTGGAGCGTAATGCCAGAAATGTCACCTGCATATTTCCCTAGAGCCCGCTGG
TATGATTACTACAGGGTGTGGATATTAATGCAAGAGGAGAGTGGAAAGACCTTGCCAGCCCCTCTTGACCACATT
AATCTTCATGTCCGTGGGGGCTACATCCTGCCCTGGCAAGAGCCTGCACTGAACACCCACTTAAGCCGCCAGAAA
TTCATGGGCTTCAAAATTGCCTTGGATGATGAAGGAAGTCTGGGGGCTGGCTCTTCTGGGATGATGGGCAAAGC
ATTGATACCTATGGGAAAGGACTCTATTACTTGGCCAGCTTTTCTGCCAGCCAGAATACGATGCAAAGCCATATA
ATTTTCAACAATTACATCACTGGTACAAATCCTTTGAAACTGGGCTACATTGAAATCTGGGGAGTGGGCAGTGTC
CCCGTTACCAGTGCCAGCATCTCTGTGAGTGGCATGGTCATAACACCCTCCTTCAACAATGACCCACGACACAG
GTATTAAGCATCGATGTGACTGACAGAAACATCAGCCTACATAATTTACTTCATTGACGTGGATAAGCACTCTG
TGAATTTTTTACAGCAAGATTCTAACTAACTATGAATGACTTTGAACTACTTATACTTCATACTCATAAAAATTA
TTGTGTGTTGCTAATTTGTTTCATACCCACTATTGGTGAAATATTTCTGTAAATTTTGTATATGTTTTTGTGTG
AACCCTAAAGGTTAAACCTTAGCCCTGTGGGATAGGCAGTTAGGGAGGTGTGGAAAATCTATGCATTACCTTAAT
GTCTCTGTGTGGTTAGTATGGTAGTACTGTTTCATCATATGACATTTACTGAAGATGAAGTGGGTCCATGATGAA
GTGTGTGATGTCCACGTTTGTAAATCATAGAATGGACCCCATTTCTTTGTTAAATACACAAGAGAAAGCTTTCTG
TGACAGTTCCAGGCTTGAAGCTAATCAGCATCTCAAGAAAGTATCCAGAAAGAACATCTGCTAGTTGGTTATAG
GCGGTGGGAGGAATAATATACCTAATTGGTTATAGGTGGGGGGAGCATGATAAGCAAAGAAAAGGCAAACACAAG
GAAAGATCAGATGAAACAGAAGATGATAGTAAAGTGATCCTAAGTAAGAACATAATGTAAATTTGTCAGCAGCC
TCATGGGGAGGAAAAAGGAAGAGTCAACTCACTTGAAGAAGAGGGTCTTGAGAAATCCTTAGCATAAAGGGCTAC
TGGTGAGATTGAGATCTGAGCAGGCAAAGCTCAAAAGAGAGTTTGGAGGTTAAAAATAATTTATTTTTGCAGTAG
TGTGCTTTGAAATGTGTAAATCTTATTTCTAATGTATACAACCACATTTACATAAAAAATATGCAATTTATATGC
CAGATAAAAAATAAAACAAGTGAATTTGCAAGTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 497

MARKKLKKFTTLEIVLSVLLLVLFIISIVLIVLLAKESLKSTAPDPGTTGTPDPGTTGTPDPGTTGTTTHARTTGP
PDPGTTGTTTPVSAECPVVNELERINCIPDQPPTKATCDQRGCCWNPQGAVSVWPCYYSKNHSHVEGNLVNTNAG
FTARLKNLPSSPVFGSNVDNVLTALEYQTSNRFHFKLTDQTNNRFVEVPHEHVQSFSGNAAASLTYYQVEISRQPFSS
IKVTRRSNNRVLFDSSIGPLLFADQFLQLSTRLPSTNVYGLGEHVHQYRHDNMNWKTPIFNRDTPNGNGTNY
GAQTTFFLCLEDASGLSFGVFLMNSNAMEVVLQPPAPAITYRTIGGILDYFVFLGNTPEQVVQYELIGRPALPSY
WALGFHLSRYEYGTLDNMREVERNRAAQLPYDVQHADIDYMDERRDFTYDSVDFKGFPEFVNELHNNNGQKLVI
VDPAISNNSSSSKPYGPYDRGSDMKIWNSSDGVTPFLIGEVWPGQTVFPDYTNPNCAVWWTKEFELFHNQVEFDG
IWIDMNEVSNFVDGSGVSGCSTNNLNNPFTPRILDGYLFCKTLCMDAVQHWGKQYDIHNLYGYSMATAEAAKT
VFPNKRSLFILTSTFAGSGKFAAHWLGDNATWDDLRSIPGVLEFNLFGLPMVGPDICGFALDTPEELCRRWMQ
LGAFFPFSRNHNGQGYKDQDPASFGADSLLLNSSRHYLNIRYTLPLYLTLFFRAHSRGDTVARPLLHEFYEDNS
TWDVHQQLWGPGLLITPVLDEGAEKAMAYVPDAVWYDYETGSQVRWRKQKVEMELPGDKIGLHLRGGYIFFTQQ
PNTTTLASRKNPLGLIIALDENKEAKGELFWDDGETKDTVANKVYLLCEFSVTQNRLEVNISQSTYKDPNNLAFN
EIKILGTEEPSNVTVKHNGVPSQTSPTVTYDSNLKVAIITDIDLLEAYTVIEWSIKIRDEEKIDCYPDENGASA
ENCTARGCIWEASNSSGVFFCYFVNDLYSVSDVQYNHSGATADISLKSSVYANAFSTPVPNPLRLDVTYHKNEMP
QFKIYDPNKNRYEVPVPLNIPSMPSSTPEGQLYDVLIKKNPFGIEIRKRSIGTIIWDSQLLGFTFSDFMIRISTR
LPSKYLYGFGETEHSYRRDLEWHTWGMFSRDQPPGYKKNYGVHPYMGLEEDGSAHGVLLNSNAMDVTFQPL
PALTYRTTGGVLDYFVFLGPTPELVTOQYTELIGRPVMVPYWSLGFQLCRYGYQNDSEIASLYDEMVAQAIPYDV
QYSDIDYMERQLDFTLSPKFAGFPALINRMKADGMRVILILDPAISGNETQYPYPAFTRGVEDDVFIKYPNDGDIV
WGKVWPDFPDVVVNGSLDWDSDQVELYRAYVAFPDFFRNSTAKWWKREIEELYNNPQNPERSLKFDGMWIDMNEPS
SFVNGAVSPGCRDASLNHPPYMPHLESRRGLSSKTLCMESQQILPDGSLVQHYNVHNLYGWSQTRPTYEAVQEV
TGQRGVVITRSTFPSSGRWAGHWLGDNATAAWDQLKKSIGMTEFSLFGISYTGADICGFFQDAEYEMCVRWMQLG
AFYFPFSRNHNTIGTRRQDPVSWDAFVNI SRTVLQTRCTLLPYLYTLMHKAHTEGVTVVRPLLHEFVSDQVTWDI
DSQFLLGPAFLVSPVLERNARNVTAYFPRARWYDYTGVDINARGEWKTLPAPLDHINLHVRRGGYILPWQEPALN
THLSRQKFMGFKIALDDEGTAGGWLFWDDGQSIDTYGKGLYLLASFSASQNTMQSHIIFNNYITGTNPLKLGYLE
IWGVGSPVVISASISVSGMVITPSFNNDPTTQVLSIDVTDNRNISLHNFTSLTWISTL

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FIGURE 498

CGATCCTGCCGGAGCCCCGCCGCCGCCGGCTTGGATTCTGAAACCTTCCTTGTATCCCTCCTGAGACATCTTTGC
TGCAAGATCGAGGCTGTCTCTGGTGAGAAGGTGGTGAGGCTTCCCGTCATATTCCAGCTCTGAACAGCAACATG

GGGTGCAAAGTCCTGCTCAACATTGGGCAGCAGATGCTGCCGGCGAAGGTGGTGGACTGTAGCCGGGAGGAGACG
CGGCTGTCTCGCTGCCTGAACACTTTTGATCTGGTGGCCCTCGGGGTGGGCAGCACACTGGGTGCTGGTGTCTAC
GTCCTGGCTGGAGCTGTGGCCCGTGAGAATGCAGGCCCTGCCATTGTCATCTCCTTCCTGATCGCTGCGCTGGCC
TCAGTGCTGGCTGGCCTGTGCTATGGCGAGTTTGGTGCTCGGGTCCCCAAGACGGGCTCAGCTTACCTCTACAGC
TATGTCACCGTTGGAGAGCTCTGGGCCTTCATCACCGGCTGGAACCTTAATCCTCTCCTACATCATCGGTACTTCA
AGCGTAGCGAGGGCCTGGAGCGCCACCTTCGACGAGCTGATAGGCAGACCCATCGGGGAGTTCTCACGGACACAC
ATGACTCTGAACGCCCCCGGCGTGCTGGCTGAAAACCCGACATATTCGCAGTGATCATAATTCTCATCTTGACA
GGACTTTTAACTCTTGGTGTGAAAGAGTCGGCCATGGTCAACAAAATATTCACTTGTATTAACGTCCTGGTCTCTG
GGCTTCATAATGGTGTGAGGATTTGTGAAAGGATCGGTTAAAAACTGGCAGCTCACGGAGGAGGATTTTGGGAAC
ACATCAGGCCGTCTCTGTTTGAACAATGACACAAAAGAAGGGAAGCCCGGTGTTGGTGGATTTCATGCCCTTCGGG
TTCTCTGGTGCTCTGTGCGGGGCGAGCAGCTTGCTTCTATGCCCTTCGTGGGCTTTGACTGCATCGCCACCACAGGT
GAAGAGGTGAAGAACCCACAGAAGGCCATCCCCGTGGGGATCGTGCGCTCCCTCTTGATCTGCTTCATCGCCTAC
TTTGGGGTGTCGGCTGCCCTCACGCTCATGATGCCCTACTTCTGCCCTGGACAATAACAGCCCCCTGCCCCGAGGCC
TTTAAGCACGTGGGCTGGGAAGGTGCCAAGTACGCAGTGGCCGTGGGCTCCCTCTGCGCTCTTTCCGCCAGTCTT
CTAGGTTCCATGTTTCCCATGCCTCGGGTTATCTATGCCATGGCTGAGGATGGACTGCTATTTAAATTCTTAGCC
AACGTCAATGATAGGACCAAAACACCAATAATCGCCACATTAGCCTCGGGTGCCGTTGCTGCTGTGATGGCCTTC
CTCTTGACCTGAAGGACTTGGTGGACCTCATGTCCATTGGCACTCTCCTGGCTTACTCGTTGGTGGCTGCCTGT
GTGTTGGTCTTACGGTACCAGCCAGAGCAGCCTAACCTGGTATACCAGATGGCCAGTACTTCCGACGAGTTAGAT
CCAGCAGACCAAAATGAATTGGCAAGCACCAATGATTCCCAGCTGGGGTTTTTACCAGAGGCAGAGATGTTCTCT
TTGAAAACCATACTCTCACCCAAAACATGGAGCCTTCCAAAATCTCTGGGCTAATTGTGAACATTTCAACCAGC
CTTATAGCTGTTCTCATCATCACCTTCTGCATTGTGACCGTGCTTGGAAGGGAGGCTCTCACCAAAGGGGCGCTG
TGGGCAGTCTTTCTGCTCGCAGGGTCTGCCCTCCTCTGTGCCGTGGTCACGGGCGTCATCTGGAGGCAGCCCGAG
AGCAAGACCAAGCTCTCATTTAAGGTTCCCTTCCTGCCAGTGCTCCCCATCCTGAGCATCTTCGTGAACGTCTAT
CTCATGATGCAGCTGGACCAGGGCACCTGGGTCCGGTTTGCTGTGTGGATGCTGATAGGCTTCATCATCTACTTT
GGCTATGGCCTGTGGCACAGCGAGGAGGCGTCCCTGGATGCCGACCAAGCAAGGACTCCTGACGGCAACTTGGAC
CAGTGCAAGTGAAGCGCACAGCCCCGCCCCCGGAGGTGGCAGCAGCCCCGAGGGACGCCCCCAGAGGACCGGGAGG
CACCCACCCCTCCCCACCAGTGCAACAGAAACCACCTGCGTCCACACCCTCACTGCA

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FIGURE 499

MGCKVLLNIGQQMLRRKVVDCSREETRLSRCLNTFDLVALGVGSTLGAGVYVLAVAGAVARENAGPAIVISFLIAAL
ASVLAGLCYGEFGARVPKTGSAYLYSYVTVGELWAFITGWNILSYIIGTSSVARAWSATFDELIGRPIGEFSRT
HMTLNAPGVLAENPDIFAVIIILILTGLLTGLGVKESAMVNKIFTCINVLVLGFIMVSGFVKGSVKNWQLTEEDFG
NTSGRLCLNNDTKEGKPGVGGFMPFGFSGVLSGAATCFYAFVGFDCIATTGEEVKNPQKAIPVGIVASLLICFIA
YFGVSAALTLMMPYFCLDNNSPLPDAFKHVGWEGAKYAVAVGSLCALASLLGSMFPMPRVIYAMAEDGLLFKFL
ANVNDRTKTPIIATLASGAVAAMAFLEFLDKDLVDLMSIGTLLAYSLVAACVLVRLRYQPEQPNLVYQMASTDEL
DPADQNELASTNDSQLGFLPEAEMFSLKTI LSPKNMEPSKISGLIVNISTSLI AVLIIITFCIVTVLGREALTKGA
LWAVFLLAGSALLCAVVTGVIWRQPESKTKLSFKVPFLPVLPILSIFVNVYLMMLDQGTWVRFAVWMLIGFIY
FGYGLWHSEEASLDADQARTPDGNLDQCK

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FIGURE 500

GTTTTAGGCTCTTGGCGGTGAAGGTCAGAGTGCAGACCTGAGACCACTGCTCACCGACTTCAGACTCCAGTTTA
TCTGTGCCCCAGCTTCTCACTTAGTCTCAGAAGACTTAGGCTGAGGCCTCAGAAGGAGATCTCCATCCTTTGTC
CAGAGCAGAACAGGATGGCCATGTCCCAGGAATCATTGACCTTCAAGGACGTGTTTGTGGACTTCACCCTGGAGG
AGTGGCAGCAACTGGACTCTGCCCAGAAGAACCTCTACAGGGATGTCATGCTTGAGAACTACAGCCACCTGGTGT
CCGTGGGGTATCTAGTTGCGAAGCCTGATGTGATCTTCAGGTTGGGACCAGGTGGAGAGTCTGGATGGCAGATG
GGGGGACCCCGGTACGGACCTGTGCAGAAGTCTGGCAAGTTGATGAGCAGATAGATCACTACAAGGAAAGCCAAG
ACAAACTTCCTTGGCAAGCTGCATTTCATAGGCAAGGAAACACTGAAGGATGAAAGCGGTCAAGAATCCAGAACAT
GTAGAAAAGCATTATCTGAGCACAGAAATTTGATTCTGTAAGGCAAAGACTCCCTAAATATTATTCGTGGGAAA
AGGCATTCAAACATCATTTAACTTTCTTGGTCAAATGGAAGCTATGTAAGAAAGAAAGATGATGGATGTAAA
GCATATTGGAAAGTATGCTTCCATTATAATCTTCATAAAGCTCAACCTGCAGAGAGATTTTTTGACCCTAATCAA
CGAGGGAAAGCCCTCCACCAAAGCAAGCCCTTAGAAAAAGTCAGAGAAGTCAAACCTGGGGAGAACTCTACAAA
TGTACTGAATGTGGAAAAGTGTATCCAGAAAGCAAACCTTAGTTGTACATCAAAGAACTCACACCGGAGAGAAA
CCTTATGAATGCTGCGAATGTGCAAAAGCCTTCAGCCAGAAGTCAACCTCATAGCACACCAGAGAACTCACACA
GGGGAGAAGCCCTATGAATGCAGTGAATGTGGA AAAACCTTTATCCAGAAGTCAACTCTGATTAAACATAAGAAA
ATTCATATGGAGAGAGACCCTATAAATGCAGTGTCTGTGAGAAAGCCTTCAGTAGGAAGTCAACTCTCATTAAAC
ATCAGATAATTTCATATGGGAGAAACCTTATGAATGTAATAAATGTGGGAAATCTTTTAGTGTTAAATCAACTCTC
ATTGTATGTCACAGAACATAAATGCATAAGTTGCATGCTATTGTGAATAGTGTGATGAAATTTTGCACGTGCTCTG
CTCTTTCCTGCTCAGGATGCAAATCAGTGAATCTTTTTTTTTTTTTTTTTTTGAGACAGAGTCTTGCTCTGTCAT
CCAACTGGAGTGCAGTGGCACAATCTTGGCTCACTGCAACCTCCGCCTCTTGGGTTCAACCGATTCTCCTGCCT
CAACCTCCCAAATAGTTGGGATTACAGGCACATGCCACCATACGCAGCTAATTTGTATTTTTTAGTAGAGACAGGG
TTTCACCATGTTGGCCAGCCTGGTCTTGAACCTCTGACCTCAAGTGATCCGCCTGCCTCAGCCTCCCAAAGTGCT
GGGATTACAGGCATGAGCCACTGCACCCGGCTTGAATCATCTTTTGTCCAGTATTATATCCATGCTGTATATGC
TACCCGCCCCTAGTCCCTTAGCTGTCTCAGTTGTCAGATTGACTGTGATGGGATTGCAGTGCTTGCAATAAAGC
TACCCTTATTGTATAATGACCCCAAAGTGCAAGAGTAGTGATGTTGGCAATTTGCATACACCAAAAAATAAGTTAT
AAAGTGCTTCCTTAAAGTGAAATGGTTAAAGTTCTTGACTTAATAAAGAAAAAAATGTATGCTGAGGTTGTTAA
GATTTACAGTAAGAATGAATCTTCTATCCAGAAATTGTGAAGGAGGAAAAAGAACTTGTGCTAGTTTTGCTGTC
ACATCTGAACTGCAAAAGTTGTGGCCACAGTGCATCATAAGTGCTAAGACGAAAAAGACATTAAATTTGCGGAT
GGAAGGCGTGAATAGAAATGGGTTCTGACAGCAATCAGGTTCCGTACTATTACAGTTTCAGGCATCCGCTAGGG
ATCTTGAACATATCCCCATGGATAAGGGAGGGGTACTGTACCTTGTGTCATATTGTGCATTAAAGAATTCATTGA
GTGTAATCATGTAAGTCTAACACACATTTAAAAAGCTCTCAGATATCATTTTCGCCTTCGGTTGATGTAAGAAAAT
TCAAAGCTACTCAAATCATTCAATAAATGATAAAATTATTTAAAAA AAAAAAAAAA

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FIGURE 501

MAMSQESLTFKDVFDFTLEEWQQLDSAQKNLYRDVMLENYSHLVSVGYLVAKPDVIFRLGPGGESWMADGGTPV
RTCAEVWQVDEQIDHYKESQDKLPWQAAFIGKETLKDESGQESRTC RKSIYLSTEFDSVRQRLPKYYSWEKAFKT
SFKLSWSKWLCKKER

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FIGURE 502

AACACATTTTCATCTGGGCTTCTTAAATCTAAATCTTTAAATGACTAAGTTTTCTTCCTTTTCTCTGTTTTTCCT
AATAGTTGGGGCTTATATGACTCATGTGTGTTTCAATATGGAAATTATTGGAGGGAAAGAAGTGTACCTCATTC
CAGGCCATTTATGGCCTCCATCCAGTATGGCGGACATCACGTTTGTGGAGGTGTTCTGATTGATCCACAGTGGGT
GCTGACAGCAGCCCACTGCCAATATCGGTTTACCAAAGGCCAGTCTCCCACTGTGGTTTTAGGCGCACACTCTCT
CTCAAAGAATGAGGCCTCCAAACAAACACTGGAGATCAAAAAATTTATACCATTCTCAAGAGTTACATCAGATCC
TCAATCAAATGATATCATGCTGGTTAAGCTTCAAACAGCCGCAAACTCAATAAACATGTCAAGATGCTCCACAT
AAGATCCAAAACCTCTCTTAGATCTGGAACCAAATGCAAGGTTACTGGCTGGGGAGCCACCGATCCAGATTCATT
AAGACCTTCTGACACCCTGCGAGAAGTCACTGTTACTGTCCTAAGTCGAAAACTTTGCAACAGCCAAAGTTACTA
CAACGGCGACCCTTTTATCACCAAAGACATGGTCTGTGCAGGAGATGCCAAAGGCCAGAAGGATTCCTGTAAGGG
TGACTCAGGGGGCCCTTGATCTGTAAAGGTGTCTTCCACGCTATAGTCTCTGGAGGTCATGAATGTGGTGTTC
CACAAAGCCTGGAATCTACACCCTGTAAACCAAGAAATACCAGACTTGGATCAAAAGCAACCTTGTCCCGCCTCA
TACAAATTAAGTTACAAATAATTTTATTGGATGCACTTGCTTCTTTTTTCTAATATGCTCGCAGGTTAGAGTTG
GGTGTAAGTAAAGCAGAGCACATATGGGGTCCATTTTGCACCTGTAAGTCATTTTATTAAGGAATCAAGTTCTT
TTTCACTTGTATCACTGATGTATTTCTACCATGCTGGTTTTATTCTAAATAAAATTTAGAAGACT

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FIGURE 503

MTKFSSFSLFFLIVGAYMTHVCFNMEIIGGKEVSPHSRPFMASIQYGGHHVCGGVLDIPQWVLTAHCQYRFTKG
QSPTVVLGAHSLSKNEASKQLEIKKFIPFSRVTSDPQSNDIMLVKLQTAAKLNKHVKMLHIRSKTSLRSGTKCK
VTGWGATDPDSLRPSTLREVTVTVLSRKLCNSQSYNGDPFITKDMVCAGDAKGQKDSCKGDSGGPLICKGVFH
AIVSGGHECGVATKPGIYTLLTKKYQTIKSNLVPPTHN

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FIGURE 504

GGACAGCACAGCTGACAGCCGTGCTCAGAAAGTTTCTGGATCCCAGGCTCATCTCCACAGAGGAGAACACGCAGG
CAGCAGAGACCATGGGGGCCCATCTCAGCCCCTTCCTGCAGATGGCGCATCCCCTGGCAGGGGCTCCTGCTCACAG
CCTCACTTTTACCTTCTGGAACCCGCCCACCACTGCTCAGCTCACTATTGAAGCTGTGCCATCCAATGCTGCAG
AGGGGAAGGAGGTTCTTCTACTTGTCCACAATCTGCCCCAGGACCCTCGTGGCTACAACCTGGTACAAAGGGGAAA
CAGTGGAATGCCAACCGTCGAATTATAGGATATGTAATATCAAATCAACAGATTACCCCAGGGCCTGCATACAGCA
ATCGAGAGACAATATACCCCAATGCATCCCTGCTGATGCGGAACGTACCAGAAATGACACAGGATCCTACACCC
TACAAGTCATAAAGCTAAATCTTATGAGTGAAGAAGTAACTGGCCAGTTTCAGCGTACATCCGGAGACTCCCAAGC
CCTCCATCTCCAGCAACAACCTCCAACCCCGTGGAGGACAAGGATGCTGTGGCCTTCACCTGTGAACCTGAGACTC
AGAACACAACCTACCTGTGGTGGGTAAATGGTCAGAGTCTCCCGGTGAGTCCCAGGCTGCAGCTGTCCAATGGCA
ACAGGACCCTCACTCTACTCAGTGTCAACAAGGAATGACGTAGGACCCTATGAATGTGAAATACAGAACCCAGCGA
GTGCAAACTTCAGTGACCCAGTCACCCTGAATGTCTCTATGGCCCAGATGCCCCCACCATTTCCTTCAGACA
CCTATTACCATGCAGGGGTAAATCTCAACCTCTCCTGCCATGCGGCCTCTAATCCACCCTCACAGTATTCTTGGT
CTGTCAATGGCACATTCCAGCAATACACACAAAAGCTCTTTATCCCCAACATCACTACAAAGAACAGCGGATCCT
ATGCCTGCCACACCACTAACTCAGCCACTGGCCGCAACAGGACCACAGTCAGGATGATCACAGTCTCTGATGCTG
TAGTACAAGGAAGTTCTCCTGGCCTCTCAGCTAGAGCCACTGTCAGCATCATGATTGGAGTACTGGCCAGGGTGG
CTCTGATATAGTAGCTCTGGTGTAGTTTCTGCATTTCAAGAAGACTGGCAGACAGTTGTTTTTATTCTTCCTCAA
AGCATTGCAATCAGCTACCATTCAAAATTGCTTCTTCTTCAAGATTTATGGAAAATACTCTGACGAGTACTCTT
GAACACAAGTTCTTGATAACTTTAAGATCACGCCACTGGACTGTCTATGAACTTGCAAAACAGGCTGATACCTTTG
TGAAGTTGCCCACCAAAACACAGAAGGAAAAAAACATGAATTTTATTGAACTAAATAATAATGAGGATAATGTTT
TTAAGATTTTTTTTTTTTTTTTTTTTTTGGAGATGGAATCTCGCTCTGTGCGCCAGGCTGGAGTGCAGTGGCACGATC
TCAACTCACTGCAACGTCCGCCTCCTGGGTTACACCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACTACA
GGCGCCTGCCACAACGCCC GGCTAATTTTTTGTATTTTTTAGTAGAGACGGGGTTTCACTGTGGTCTCAATCTCCT
GACTTCATGGTCCGCCTGCCTCAGCCTCCCAAAGTTCTGGGATTACAGGTGTGAGCCACCGCGCCCAGCCCGTTT
TTAAGATTTTTTATTTGAAAAATTGCCAATCTTTAAGTGTTTTCTTTTTTTCAGATTTATGAATTTCTTTATCTTT
TAAGCTATCTATACCTTACTGCAATTTGGTAAAGCAGACTTTTGTGAACAAAAATTATAACATTTACTTTTGCTC
CCTACCTGACTGCCACAGAACTGGGCAACTATTCATGAGTATTCATATGTTTATGGTAATTCAGTTATTTGCACA
AGTTTCAGTGAGAATCTGCTGTCTTTATAATGGGATATAGTTTAAACATTGGTTATATTACCAAGGCTTTGATTG
GGATGTTATATTTGAGAAAAATACAGAGAATGATAGATTAACGGAGTGTCTAATCTATCGTGTCAACCCCAAATTT
TTACGTATGAGATCCTTTAGTCCACCCAATGGCTGACAGTAACAGCATCTTTAACACAACCTCTTTGTTCAAATGT
ACTATGGTCTCTTTTAGAGTCAGACTCCTAGACTCACTGTTCTCACTGTCTGTTTTAATTTAACCCAGGCATGC
AATGCTAGATAATAAAATTGCTCCCTATTGGCTGATC

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FIGURE 505

MGPISAPSCRWRIPWQGLLLTASLFTFWNPPTTAQLTIEAVPSNAAEGKEVLLL VHNLPQDPRGYNWYKGETVDA
NRRIIGYVISNQQITPGPAYSNRETIYPNASLLMRNVTRNDTGSYTLQVIKLNLMSEEV TGQFSVHPETPKPSIS
SNNSNPVEDKDAVAFTCEPETQNTTYLWWVNGQSLPVSPRLQLSNGNRTLTL LSVTRNDVGPIECEIQNPASANF
SDPVTNLNVLGPDAPTISPDTYYHAGVNLNLSCHAASNPPSQYSWSVNGTFQQYTQKLFIPNITTKNSGSYACH
TTNSATGRNRRTTVRMITVSDAVVQGSSPGLSARATVSIMIGVLARVALI

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FIGURE 506

CGCAAGAATGCATACAAACTCCAGGGCTGCTCTCTCCTGGAGAGGGAGGGAGGGGATTTAAAAACCTGCAGCAAC
ATGGGGGAGGAGGCTGTTTGTCTTCTCTCTCTGGGGAAGTAACTCGCTCAAACCTGCCTTCCTTGCTGAGCTGCT
TCGCGTAGCTTTGAGGAAGGTCTAGTGAAATTGGTCTTTCATTACATCTGGATGTACTACCAGAGAGTTCTGCT
GCTGTTGTTTTTTTTAGCTTTTTCTTTCTTTGAGTCTTTAAAGGGCAATTGTGACACTCTGCAAACATACCGATT
TGTGCTCTGCCCACTTTGGAGTCTTCAATCTGGGCAGTAACTATTTACCTTTTTCTGCTAGCCTGTCCCCCTC
TCTGGATTGAAGTCACCTGCTAAGACAATGGACTACCGACCAGACTCCCGGAAATCATGTTGGTAGGATCCCAGT
CTTTTTCGCCTGGAGGGCCCAATGGGATCATTAGAAGCCAGTCTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGC
GATCCAGGTGTAACCTCTTCAATTGAAAATTCCTCCGCTCTCAAGAAGCCTCAGGCCAACTGAAGAAAATGCACA
ATTTAGGCCACAAAAACAACAATCCCCCAAGAGCCTCAGCCTAAAAGGGTGGAAGAAGTCTACAGGGCCTTGA
AAAATGGACTTGATGAATATCTGGAGTTTACCAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGA
AAAGAACTCTCGCCTGGGTGTACTGTATGACCTAGACAAGCAAATTTAAACAATTGAAAGATACATGAGACGCC
TGGAGTTTCATATAAGTAAGGTAGATGAACCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCA
GCAAAATGAAGCAAGCCTTCGCAACATCCCCCTGCCAGCAAAGCTGCCCGGGAGAGTCTGACAGAGATCAATCGGA
GCTTCAAGGAGTACACAGAGAATATGTGCACCAATTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCA
AGATGAAAGGTCTGGCTGGCTTTGCACGCCTCTGTCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGC
AGCGGTGGAACCTGAAAGGCAAAATAGAAGTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTTCTGC
CCCTGATAGTTGGGTTCATCTCCATCAAGGTACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCG
TGACCTGTGAGACCAAAGAGCTGTTTGCAGCCCGACCTCAGGTAGTGGCTGTGACATCAATGACCTTGGTACCA
TCAAACCTGAACCTGGAAATCACCTGGTATCCATTTGACGTGGAGGACATGACCGCATCCTCAGGCGCTGGGAACA
AGGCAGCAGCCCTTCAGAGGAGAATGTCCATGTACAGCCAGGGTACCCCGGAAACGCCACCTTCAAAGACCACT
CCTTCTTTTCAAATCTACCTGATGACATCTTTGAAAATGGAAAGGCAGCCGAGGAGAAAATGCCACTGTGCTCA
GCTTCAGTGACCTGCCCAACGGGGACTGCGCCCTCACCTCCCCTCAACAGGCTCCCCTTCCAACCTCAACAAATC
CAGAAATTACCATCACCCCTGCGGAGTTTAACTCAGCAGCTTGGCCTCCCAGAATGAGGGTATGGATGACACCA
GCTCAGCATCTTCCAGGAACCTCCCTGGGAGAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGG
AGCCCAGAAAACCTGCCTCGGCCCATCTGAGGCTTGCCGCCGACAGTCTCAGGTGCTGGGGCTGAGCACCTGT
TCCTTGAGAATGATGTTGCAGAAGCACTTCTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACCTGG
ACACTTCGGAAGGAAACATCACAAAGCAGCTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACA
GGCTGCTCTCTGAGGGTTCTGTTGGTGGAGAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATG
CTTTTAATGGGCTTTTACTTGCATTAGAACCACATAAAGAGCAGTATAAAGAGTTTCAGGATCTGAACCAAGAAG
TCATGAATTTGGATGATATTCTAAAAAAGTAGAGAAGATCCTCTAATGGATCCAGTGTCGCCATCCCTCAACCT
CCTCAGTGATCAACTCATGGCCAATCTTGTTTCCTATTCTTCAACCTGCTGACTTCCCTCTGGATTCTTCTGCAA
CCAGTCCCAGATATTGTGCCATTTTATCCATGGTTGTACTTCTTTTTTGGATATAAAGATTTTTAAATGCATTTT
TTAAATGCTAACAAAAAATAAAACTTGAAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 507

MLVGSQSFSPGGPNGIIRSQSFAGFSGLQERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNPPKEPQPKRVE
EVYRALKNGLDEYLEVHQTELDKLTQLKDMKRNSRLGVLYDLKQIKTIERYMRRLEFHISKVDELYEAYCIQR
RLQDGASKMKQAFATSPASKAARESLTEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDVEDMTASSGAGNKAALQRRMSMYSQGTPETPTFKDHSFFSNLPDDIFENGKAAEE
KMPLSLSFSDLPNGDCALTSHSTGSPSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHL
KEEDPEEPRKPASAPSEACRRQSSGAGAEHLFLENDVAEALLQESEEASELKPVELDTSEGNITKQLVKRLTSAE
VPMATDRLLSEGSVGGESEGCRSFLDGSLEDAFNGLLLALEPHKEQYKEFQDLNQEVMLDDILKK

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FIGURE 508

CGGGGGCTGGCGGCTGCGGCTCGGCGGAGAGTGCGGC**ATG**CGCTCGGAAAAGGAGGGGGCCGGAGGCCTTCGGGC
GGCCGTTGCCGCGCGGGGCCCCGAGCGGGAGGGAGAAGCTGTGGGCCCTAGAAGTGCAGTTCCACCGCGACTCGCA
GCAGCAGGAGGCTGAGACGCCGCCAACTTCGTCTCCGGTTGCGGGGGCGGTGCGGGCAAACCTCGCGAGGAGAA
GAGGACGGCCCTGAGCAAGGTGGTCATCCGCCGCCTGCCTCCGGGCCTCACCAAGGAGCAGCTGGAGGAGCAGCT
GCGCCCGCTGCCAGCACACGACTACTTCGAGTTCTTCGCCGCCGACCTGAGTCTTTATCCTCATCTCTACTCAAG
AGCATACATTAATTTTAGGAATCCTGATGACATCCTTCTTTTTAGAGATCGTTTTTGATGGATATATCTTCCTTGA
CAGCAAAGGCCCTAGAATATCCTGCAGTGGTAGAGTTTGCTCCATTCCAGAAGATAGCCAAAAAGAAGCTGAGAAA
AAAAGATGCCAAGACTGGAAGCATCGAAGATGATCCAGAATATAAGAAGTTTTTAGAAACCTACTGTGTGGAGGA
AGAGAAGACCAGTGCCAACCCTGAGACTCTGCTGGGGGAGATGGAGGCGAAGACAAGAGAGCTCATTGCTAGAAG
AACCACACCTCTTTTGGAATATATTAAAAATAGAAAATTAGAAAAGCAGAGAATTCGAGAAGAGAAGCGAGAAGA
ACGGAGGAGGAGAGAGTTAGAAAAGAAACGTTTGCGGGAAGAGGAAAAAAGAAGAAGAAGAAGAAGAAAGATG
CAAAAAAAAAAGAGACAGATAAACAGAAGAAAATTGCAGAGAAAAGAAGTAAGGATTAAGCTTCTTAAGAAACCAGA
AAAGGGAGAGGAACCAACCACAGAGAAAACAAAAGAAAGAGGAGAGGAGATTGATACTGGAGGTGGCAAGCAGGA
ATCCTGTGCCCCCGGTGCAGTCGTAAGCCAGGCCCATGGAAGGCTCGCTGGAGGAGCCCCAGGAGACGTCACA
CAGCGGCAGTGATAAAGAGCACAGGGATGTGGAGAGATCTCAAGAACAAGAATCTGAAGCACAAAGATACCATGT
GGATGACGGCAGGAGGCACAGAGCTCACCACGAGCCTGAACGGCTTTCAGAAAGGAGTGAGGATGAGCAGAGATG
GGGGAAAGGACCTGGCCAAGACAGAGGGAAGAAGGGGAGCCAGGACAGCGGGGCTCCGGGGGAGGCCATGGAGAG
ACTGGGAAGAGCGCAGAGGTGTGACGACAGTCCAGCACCCAGAAAAGAGCGACTGGCAAACAAGGACCGGCCAGC
CTTGACAGCTGTATGATCCAGGAGCTCGCTTCCGAGCGCGAGAGTGTGGCGGAAACAGGAGGATCTGCAAGGCAGA
AGGTTCCGGGACTGGTCCTGAGAAGAGGGAAGAGGCAGAG**TCAG**TCACTGCACGCACCTGGCCTCCATGGACGAG
CAAGGGCATCCCAGAAACGTGTAAATGACCCCGAGTGTGACTGGGAAGGAGAACTTATTCCTTACCAGGAAACTG
GAAGCTAAAAATACAGAGGGTGACGTAGAAACACGCAGAAACCATTTCTAAAGAAAGTAGTGATCTTGTATTAAAT
TGAGCAGAAATTCTCACAGATTTTACCATTCTGTTATAAACTAGTATTTGTTGTTTAGCCAAAACAGAAAATGAT
TTCCACTGGACAGTAGAAAAATATGTGTAAATAGGGAAGAAAGTTAGTATTGGATCAGTGTGAGTCCTGAAGCA
CTTTCAGTGCTGTGAGAACGACATCCACTTTGGGTTTCATTTCGTTTGTAGCAGAGGAGCTGTGAGTCAGTCGTG
CTTCTCGGTGGCCTCTGAGCCATGGTGTGCGAGTGAAGAGTAGTTCTTGTGTTTACAACCTTTGTGAGTCAGCCA
TGCCCGCAAAGCGTGCTGTGTTTTAGTCCTGGTAGGAATATTTATCAGAGTTCACACTATATAAAACCAACAGC
TTCAACTATTGCCCTTTCAACAGTTTTGCCACTGACCGGATAGAAACGGTTTCAGTCTCTGGATGGATGTGTTTG
TGTTTGTAAACCATTACGGTTTTAAACCATGGTTTTAAGAATTTGCCCAAATAACAGAAATTTTGTTCGGGAAGGGA
TAACTAGATATAGCATACAGAGCCTGTTTTTGAGTTTTAGATACTTTATTTGTAAATAACTTAAATAGCTTTC
TGAAACCGTGCAATCTGTAGTTTCTTCCTTTCAGTGAAATTGCTAAATGTCAATGTATTTTTGGCACTGCGATTT
TAACCATTTATTAAATAAAAATTTTGTTAAAGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 509

MRSEKEGAGGLRAAVAARGPSGREKLSALEVQFHRDSQQQEAETPPTSSSGCGGGAGKPREEKRTALSKVVIRRL
PPGLTKEQLEEQRLRPLPAHDYFEFFAADLSLYPHLYSRAYINFRNPDDILLFRDRFDGYIFLDSKGLEYPAVVEF
APFQKIAKKKLRKKDAKTGSIEDDPEYKKFLETYCVVEEKT SANPETLLGEMEAKTRELIARRTP LLEYIKNRK
LEKQRIREEKREERRRRELEKKRLREEEKRRRREERCKKKETDKQKKIAEKEVRIKLLKKPEKGEEPTTEKPKE
RGEEIDTGGGKQESCAPGAVVKARPMEGSLEEPQETSHSGSDKEHRDVERSQQESEAQRYHVDDGRRHRAHHEP
ERLSRRSEDEQRWGKPGQDRGKKGSQDSGAPGEAMERLGRAQRCDDSPAPRKERLANKDRPALQLYDPGARFRA
RECGGNRRICKAEGSGTGPEKREEAE

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FIGURE 510

GCCCCATCTCCTTGGGGCTGCCCGTGCTTCGTGCTTTGGACTACCGCCCAGCAGTGTCTGCCCTCTGCCTGGGCC
TCGGTCCCTCCTGCACCTGCTGCCTGGATCCCCGGCCTGCCTGGGCCTGGGCCTTGGTTCTCCCCATGACACCAC
CTGAACGTCTCTTCCCTCCCAAGGGTGTGTGGCACCACCCTACACCTCCTCCTTCTGGGGCTGCTGCTGGTTCTGC
TGCTTGGGGCCCAGGGGCTCCCTGGTGTGGCCTCACACCTTCAGCTGCCCAGACTGCCCGTCAGCACCCCAAGA
TGCATCTTGCCACAGCACCCCTCAAACCTGCTGCTCACCTCATTGGAGACCCCAGCAAGCAGAATCACTGCTCT
GGAGAGCAAACACGGACCGTGCCTTCCTCCAGGATGGTTTCTCCTTGAGCAACAATTCTCTCCTGGTCCCCACCA
GTGGCATCTACTTCGTCTACTCCCAGGTGGTCTTCTCTGGGAAAGCCTACTCTCCCAAGGCCACCTCCTCCCCAC
TCTACCTGGCCCATGAGGTCCAGCTCTTCTCCTCCCAGTACCCCTTCCATGTGCCTCTCCTCAGCTCCCAGAAGA
TGGTGTATCCAGGGCTGCAGGAACCCCTGGCTGCACTCGATGTACCACGGGGCTGCGTTCCAGCTCACCCAGGGAG
ACCAGCTATCCACCCACACAGATGGCATCCCCACCTAGTCTCAGCCCTAGTACTGTCTTCTTTGGAGCCTTCG
CTCTGTAGAACTTGGAATAATCCAGAAAGAAAAATAATTGATTTCAGACCTTCTCCCCATTCTGCCTCCATTC
TGACCATTTAGGGGTCGTCACCACCTCTCCTTTGGCCATTCCAACAGCTCAAGTCTTCCCTGATCAAGTCACCG
GAGCTTTCAAAGAAGGAATTCTAGGCATCCCAGGGGACCACACCTCCCTGAACCATCCCTGATGTCTGTCTGGCT
GAGGATTTCAAGCCTGCCTAGGAATTCAGCCCAAAGCTGTTGGTCTGTCCCACCAGCTAGGTGGGGCCTAGAT
CCACACACAGAGGAAGAGCAGGCACATGGAGGAGCTTGGGGGATGACTAGAGGCAGGGAGGGGACTATTTATGAA
GGCAAAAAAATTAAATTATTTATTTATGAGGATGGAGAGAGGGGAATAATAGAAGAACATCCAAGGAGAAACAG
AGACAGGCCCAAGAGATGAAGAGTGAGAGGGCATGCGCACAAGGCTGACCAAGAGAGAAAGAAGTAGGCATGAGG
GATCACAGGGCCCCAGAAGGCAGGGAAAGGCTCTGAAAGCCAGCTGCCGACCAGAGCCCCACACGGAGGCATCTG
CACCTCGATGAAGCCCAATAAACCTCTTTTCTCTG

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FIGURE 511

MTPPERLFLPRVCGTTLHLLLLGLLLVLPGAQGLPGVGLTPSAAQTARQHFKMHLAHSTLKPA AHLIGDPSKQN
SLLWRANTDRAFLQDGFSLSNNSLLVPTSGIYFVYSQVVFSGKAYSPKATSSPLYLAHEVQLFSSQYPFHVPLLS
SQKMVYPGLQEPWLHSMYHGA AFQLTQGDQLSTHTDGIPHLVLSPSTVFFGAFAL

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FIGURE 512

TGGAAGGGCTGTCACCCGGCTTGGCCCCCTCCACACCCAAGCTGAGCCGGCGACAGGAGGCATG
AGGGGCCCCCGGCCGAAATGACAGTGCTGGCGCCAGCCTGGAGCCCAACAACCTATCTCCTCCTGCTGCTGCTGC
TGAGCTCGGGACTCAGTGGGACCCAGGACTGCTCCTTCCAACACAGCCCCATCTCCTCCGACTTCGCTGTCAAAA
TCCGTGAGCTGTCTGACTACCTGCTTCAAGATTACCCAGTCACCGTGGCCTCCAACCTGCAGGACGAGGAGCTCT
GCGGGGCGCTCTGGCGGCTGGTCCTGGCACAGCGCTGGATGGAGCGGCTCAAGACTGTCGCTGGGTCCAAGATGC
AAGGCTTGCTGGAGCGCGTGAACACGGAGATACACTTTGTACCAAATGTGCCTTTCAGCCCCCCCCCAGCTGTC
TTCGCTTCGTCCAGACCAACATCTCCCGCCTCCTGCAGGAGACCTCCGAGCAGCTGGTGGCGCTGAAGCCCTGGA
TCACTCGCCAGAACTTCTCCCGGTGCCTGGAGCTGCAGTGTGAGCCGACTCCTCAACCTGCCACCCCCATGGA
GTCCCCGGCCCCCTGGAGGCCACAGCCCCGACAGCCCCGAGCCCCCTCTGCTCCTCCTACTGCTGCTGCCCCGTGG
GCCTCCTGCTGCTGGCCGCTGCCTGGTGCCTGCACTGGCAGAGGACGCGGCGGAGGACACCCCGCCCTGGGGAGC
AGGTGCCCCCGTCCCCAGTCCCCAGGACCTGCTGCTTGTGGAGCACTGACCTGGCCAAGGCCTCATCCTGGGGA
GGATACGTAGGCACACAGAGGGGAGTCACCAGCC

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FIGURE 513

MTVLAPAWSPTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTVASNLQDEELCGALWR
LVLAQRWMERLKTVAGSKMQGLLERVNTEIH FVTKCAFQPPPSCLRFVQTNISRLQETSEQLVALKPWITRQNF
SRCLELQCQPDSSSTLPPPWSRPLEATAPTAPQPPLLLLLLLLPVGLLLAAAWCLHWQTRRRRTPRPGEQVPPVP
SPQDLLLVEH

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FIGURE 514A

CTTCAGATAGATTATATCTGGAGTGAAGGATCCTGCCACCTACGTATCTGGCATAGTATTCTGTGTAGTGGGATG
AGCAGAGAACAAAAACAAATAATCCAGTGAGAAAAGCCCGTAAATAAACCTTCAGACCAGAGATCTATTCTCCA
GCTTATTTTAAAGCTCAACTTAAAAAGAAGAACTGTTCTCTGATTCTTTTCGCCTTCAATACACTTAATGATTTAA
CTCCACCCTCCTTCAAAAAGAAACAGCATTTCCTACTTTTATACTGTCTATATGATTGATTGTCACAGCTCATCTG
GCCAGAAGAGCTGAGACATCCGTTCCCTACAAGAACTCTCCCCGGGTGGAACAAGATGGATTATCAAGTGTCA
AGTCCAATCTATGACATCAATTATTATACATCGGAGCCCTGCCAAAAAATCAATGTGAAGCAAATCGCAGCCCGC
CTCCTGCCTCCGCTCTACTCACTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCATCCTCATCCTGATA
AACTGCAAAAAGGCTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTTCTTTCTT
ACTGTCCCCCTTCTGGGCTCACTATGCTGCCGCCAGTGGGACTTTGGAAATACAATGTGTCAACTCTTGACAGGG
CTCTATTTTATAGGCTTCTTCTCTGGAATCTTCTTCATCATCCTCCTGACAATCGATAGGTACCTGGCTGTCTGTC
CATGCTGTGTTTGCTTTAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGGTGGTGGCT
GTGTTTGGCTCTCTCCAGGAATCATCTTTACCAGATCTCAAAAAGAAGGTCTTCATTACACCTGCAGCTCTCAT
TTCCATACAGTCAGTATCAATTCTGGAAGAATTTCCAGACATTAAAGATAGTCATCTTGGGGCTGGTCTGCGG
CTGCTTGTATGGTCATCTGCTACTCGGGAATCCTAAAACTCTGCTTCGGTGTGAAATGAGAAGAAGAGGCAC
AGGGCTGTGAGGCTTATCTTCACCATCATGATTGTTTATTTTCTTCTTGGGCTCCCTACAACATTGTCCTTCTC
CTGAACACCTTCCAGGAATCTTTGGCCTGAATAATTGCAGTAGCTCTAACAGGTTGGACCAAGCTATGCAGGTG
ACAGAGACTCTTGGGATGACGCACTGCTGCATCAACCCCATCATCTATGCCTTTGTGCGGGGAGAAGTTCAAGAAC
TACCTCTTAGTCTTCTTCCAAAAGCACATTGCCAAACGCTTCTGCAAAATGCTGTTCTATTTTCCAGCAAGAGGCT
CCCAGCGAGCAAGCTCAGTTTACACCCGATCCACTGGGGAGCAGGAAATATCTGTGGGCTTGTGACACGGACTC
AAGTGGGCTGGTGACCCAGTCAGAGTTGTGCACATGGCTTAGTTTTATACACAGCCTGGGCTGGGGGTGGGGTG
GGAGAGGTCTTTTTTAAAGGAAGTTACTGTTATAGAGGGTCTAAGATTATCCATTTATTTGGCAICTGTTTTAA
AGTAGATTAGATCTTTTAAAGCCCATCAATTATAGAAAGCCAAATCAAAATATGTTGATGAAAAATAGCAACCTTT
TTATCTCCCCCTTACATGCATCAAGTTATTGACAAACTCTCCCTTCACTCCGAAAGTTCCTTATGTATATTTAAA
AGAAAGCCTCAGAGAATTGCTGATTCTTGAGTTTGTGATCTGAACAGAAATACCAAAATTATTTAGAAATGTA
CAACTTTTTTACCTAGTACAAGGCAACATATAGGTTGTAAATGTGTTTAAACAGGTCTTTGTCTTGCTATGGGGA
GAAAAGACATGAATATGATTAGTAAAGAAATGACACTTTTTCATGTGTGATTTCCTCCCTCCAAGGTATGGTTAATAA
GTTTCACTGACTTAGAACCAGGCGAGAGACTTGTGGCCTGGGAGAGCTGGGGAAGCTTCTTAAATGAGAAGGAAT
TTGAGTTGGATCATCTATTGCTGGCAAAGACAGAAGCCTCACTGCAAGCACTGCATGGGCAAGCTTGGCTGTAGA
AGGAGACAGAGCTGGTTGGGAAGACATGGGGAGGAAGGACAAGGCTAGATCATGAAGAACCTTGACGGCATTGCT
CCGTCTAAGTCATGAGCTGAGCAGGGAGATCCTGGTTGGTGTGTCAGAAGGTTTACTCTGTGGCCAAAGGAGGGT
CAGGAAGGATGAGCATTAGGGCAAGGAGACCACCAACAGCCCTCAGGTCAGGGTGAGGATGGCCTCTGCTAAGC
TCAAGGCGTGAGGATGGGAAGGAGGGAGGTATTCTGAAGGATGGGAAGGAGGGAGGTATTCTGTCAGCATATGAG
GATGCAGAGTCAGCAGAATGGGGTGGATTTGGTTTGGAAAGTGAAGGTCAGAGAGGAGTCAGAGAGAATCCCTAG
TCTTCAAGCAGATTGGAGAAACCCTTGAAAAGACATCAAGCACAGAAGGAGGAGGAGGAGGTTAGGTCAAGAAG
AAGATGGATTGGTGTAAGGATGGGTCTGGTTTGCAGAGCTTGAACACAGTCTCACCCAGACTCCAGGCTGTCT
TTCCTGAATGCTTCTGACTTCATAGATTTCTTCCCATCCCAGCTGAAATACTGAGGGGTCTCCAGGAGGAGAC
TAGATTTATGAATACACGAGGTATGAGGTCTAGGAACATACTTCAGCTCACACATGAGATCTAGGTGAGGATTGA
TTACCTAGTAGTCATTTATGGGTTGTTGGGAGGATTCTATGAGGCAACCACAGGCAGCATTAGCACATACTAC
ACATTCAATAAGCATCAAACCTTAGTTACTCATTACAGGGATAGCACTGAGCAAAGCATTGAGCAAAGGGGTCCC
ATATAGGTGAGGGAAGCCTGAAAACTAAGATGCTGCCTGCCAGTGCACACAAGTGTAGGTATCATTTTCTGCA
TTTAACCGTCAATAGGCAAAGGGGGGAAGGGACATATTCAATTTGGAAATAAGCTGCCTTGAGCCTTAAACCCAC
AAAAGTACAATTTACCAGCCTCCGTATTTAGACTGAATGGGGGTGGGGGGGGCGCCTTAGGTACTTATTCCAGA
TGCCTTCTCCAGACAAACCAGAAGCAACAGAAAAATCGTCTCTCCCTCCCTTTGAAATGAATATACCCCTTAGT
GTTTGGGTATATTCAATTTCAAAGGGAGAGAGAGAGGTTTTTTTCTGTTCTTTCTCATATGATTGTGCACATACTT
GAGACTGTTTTGAATTTGGGGGATGGCTAAACCATCATAGTACAGGTAAGGTGAGGGAATAGTAAGTGGTGAGA
ACTACTCAGGGAATGAAGGTGTGAGAATAATAAGAGGTGCTACTGACTTTCTCAGCCTCTGAATATGAACGGTGA
GCATTGTGGCTGTGACGAGGAAGCAACGAAGGGAAATGTCTTTCTTTTCTTAAAGTTGTGGAGAGTGCAACA
GTAGCATAGGACCTACCTCTGGGCCAAGTCAAAGACATTCTGACATCTTAGTATTTGCATATTCTTATGTATG

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FIGURE 514B

TGAAAGTTACAAATTGCTTGAAAGAAAATATGCATCTAATAAAAAACACCTTCTA

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FIGURE 515

MDYQVSSPIYDINYTSEPCQKINVKQIAARLLPPLYSLVFIFGFVGNMLVILILINCKRLKSMTDIYLLNLAIS
DLFFLLTVPFWAHYAAAQWDFGNTMCQLLTGLYFIGFFSGIFFIILLTIDRYLAVVHAVFALKARTVTFGVVTSV
ITWVVAVFASLPGIIFTRSQKEGLHYTCSSHFPYSQYQFWKNFQTLKIVILGLVLPLLVMVICYSGILKTLLRCR
NEKKRHRAVRLIFTIMIVYFLFWAPYNIVLLLNFTQEFFGLNCCSSNRDQAMQVTETLGMTHCCINPIIYAFV
GEKFRNYLLVFFQKHIAKRECKCCSIFQQEAPERASSVYTRSTGEQEISVGL

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FIGURE 516A

TGCAGAGAACAGAGAAAGGACATCTGCGAGGAAAGTTCCCTGATGGCTGTCAACAAAGTGCCACGTCTCTATGGC
TGTGTACGCTGAGCACACGATTTTATCGCGCCTATCATATCTTGGTGCATAAACGCACCTCACCTCGGTCAACCC
TTGCTCCGTCCTTATGAGACAGGCTTTATTATCCGCATTTTATATGAGGGGAATCTGACGGTGGAGAGAGAATTAT
CTTGCTCAAGGCGACACAGCAGAGCCCACAGGTGGCAGAATCCACCCGAGCCCGCTTCGACCCGCGGGGTGGAA
ACCACGGGCGCCCCGCGGCTGCGCTTCCAGAGCTGAACTGAGAAGCGAGTCTCTCCGCCCTGCGGCCACCGCC
CAGCCCCGACCCCGCCCCGCGGCGATCTCACTCGCCGCCAGCTCCCCGCGCCACCCCGGAGTTGGTGGCGCA
GAGGCGGGAGGCGGAGGCGGGAGGCGGGCGCTGGCACCGGGAACGCCCGAGCGCGCGGCAGAGAGCGCGGAGAGC
GCGACACGTGCGGCCAGAGCACCGGGGCCACCCGGTCCCCGAGGCCCGGGACCGCGCCCGCTGGCAGGCGACA
CGTGGAAGAATACGGAGTTCTATACCAGAGTTGATTGTTGATGGCACATACTTTTAGAGGATGCTCATTGGCATT
TATGTTTATAATCACGTGGCTGTTGATTAAAGCAAAAATAGATGCGTGCAAGAGAGGCGATGTGACTGTGAAGCC
TTCCCATGTAAATTTTACTTGGATCCACTGTCAATATTACATGCTCTTTGAAGCCCAGACAAGGCTGCTTTCACTA
TTCCAGACGTAACAAGTTAATCCTGTACAAGTTTGACAGAAGAATCAATTTTCACCATGGCCACTCCCTCAATTC
TCAAGTCACAGGTCTTCCCTTGGTACAACCTTGTTTGTCTGCAAACTGGCCTGTATCAATAGTGATGAAATTCA
AATATGTGGAGCAGAGATCTTCGTTGGTGTGCTCCAGAACAGCCTCAAAAATTTATCCTGCATACAGAAGGGAGA
ACAGGGGACTGTGGCCTGCACCTGGGAAAGAGGACGAGACACCCACTTATACACTGAGTATACTCTACAGCTAAG
TGGACCAAAAAATTTAACCTGGCAGAAGCAATGTAAAGACATTTATTGTGACTATTTGGACTTTGGAATCAACCT
CACCCCTGAATCACCTGAATCCAATTTACAGCCAAGGTTACTGCTGTCAATAGTCTTGGAAAGCTCCTCTTCACT
TCCATCCACATTACATTTCTTGGACATAGTGAGGCCTCTTCCCTCCGTGGGACATTAGAATCAAATTTCAAAGGC
TTCCGTGAGCAGATGTACCCTTTATTGGAGAGATGAGGGACTGGTACTGCTTAATCGACTCAGATATCGGCCCCAG
TAACAGCAGGCTCTGGAATATGGTTAATGTTACAAAGGCCAAAGGAAGACATGATTTGCTGGATCTGAAACCATT
TACAGAATATGAATTTTCAATTTCTTCTAAGCTACATCTTTATAAGGGAAGTTGGAGTGATTGGAGTGAATCATT
GAGAGCACAAACACCAGAAGAAGAGCCTACTGGGATGTTAGATGTCTGGTACATGAAACGGCACATTGACTACAG
TAGACAACAGATTTCTCTTTTCTGGAAGAATCTGAGTGTCTCAGAGGCAAGAGGAAAAATTTCTCCACTATCAGGT
GACCTTGACAGGAGTGACAGGAGGGAAGCCATGACACAGAACATCACAGGACACACCTCCTGGACCACAGTCAT
TCCTAGAACCAGAAATTTGGGCTGTGGCTGTGTCTGCAGCAAATTTCAAAGGCGAGTTCTCTGCCCACTCGTATTAA
CATAATGAACCTGTGTGAGGCAAGGTTGCTGGCTCCTCGCCAGGTCTCTGCAAACTCAGAGGGCATGGACAACAT
TCTGGTGACTTGGCAGCCTCCAGGAAAGATCCCTCTGCTGTTCAGGAGTACGTGGTGGAAATGGAGAGAGCTCCA
TCCAGGGGGTGACACACAGGTCCCTCTAAACTGGCTACGGAGTCGACCCTACAATGTGTCTGCTCTGATTTTCA
GAACATAAAATCCTACATCTGTTATGAAATCCGTGTGTATGCACTCTCAGGGGATCAAGGAGGATGCAGCTCCAT
CCTGGGTAACTCTAAGCACAAAGCACCCTGAGTGGCCCCCACATTAATGCCATCACAGAGGAAAAGGGGAGCAT
TTTAATTTTCAATGGAACAGCATTCCAGTCCAGGAGCAAATGGGCTGCCTCCTCCATTATAGGATATACTGGAAGGA
ACGGGACTCCAATCCCAGCCTCAGCTCTGTGAAATTCCTACAGAGTCTCCCAAAATTCACATCCAATAAACAG
CCTGCAGCCCCGAGTGACATATGTCTGTGGATGACAGCTCTGACAGCTGCTGGTGAAGTTCCACGGAAATGA
GAGGGAATTTTGTCTGCAAGGTAAAGCCAATTGGATGGCGTTTGTGGCACCAAGCATTGTGATTGCTATCATCAT
GGTGGGCATTTTCTCAACGCATTACTTCCAGCAAAGGTGTTTGTCTCTCTAGCAGCCCTCAGACCTCAGTGGTG
TAGCAGAGAAATTCAGATCCAGCAAATAGCACTTGCCTAAGAAATATCCCATTCAGAGGAGAAGACACAGCT
GCCCTTGGACAGGCTCCTGATAGACTGGCCCACGCCTGAAGATCCTGAACCGCTGGTCATCAGTGAAGTCCTTCA
TCAAGTGACCCCACTTTTTCAGACATCCCCCTGCTCCAATGGCCACAAAGGGAAAAAGGAATCCAAGGTCTATCA
GGCCTCTGAGAAAAGACATGATGCACAGTGCCCTCAAGCCCACCACCTCCAAGAGCTCTCCAAGCTGAGAGCAGACA
ACTGGTGGATCTGTACAAGGTGCTGGAGAGCAGGGGCTCCGACCCAAAGCCAGAAAACCCAGCCTGTCCCTGGAC
GGTGCTCCCAAGCAGGTGACCTTCCCACCCATGATGGCTACTTACCCTCCAACATAGATGACCTCCCCTCACATGA
GGCACCTCTCGCTGACTCTCTGGAAGAACTGGAGCCTCAGCACATCTCCCTTTCTGTTTTCCCCTCAAGTTCTCT
TCACCCACTCACCTTCTCCTGTGGTGATAAGCTGACTCTGGATCAGTTAAAGATGAGGTGTGACTCCCTCATGCT
CTGAGTGGTGAGGCTTCAAGCCTTAAAGTCAGTGTGCCCTCAACCAGCACAGCCTGCCCCAATTTCCCCAGCCCC
TGCTCCAGCAGCTGTATCTCTGGGTGCCACCATCGGTCTGGCTGCAGCTAGAGGACAGGCAAGCCAGCTCTGGG
GGAGTCTTAGGAACCTGGGAGTTGGTCTTCACTCAGATGCCTCATCTTGCCTTTCCAGGGCCTTAAATTTACATC
CTTCACTGTGTGGACCTAGAGACTCCAATTTGAATTCCTAGTAACTTTCTTGGTATGCTGGCCAGAAAGGGAAAT
GAGGAGGAGAGTAGAAACCACAGCTCTTAGTAGTAATGGCATAAGTCTAGAGGACCATTTCATGCAATGACTATT

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FIGURE 516B

TCTAAAGCACCTGCTACACAGCAGGCTGTACACAGCAGATCAGTACTGTTCAACAGAACTTCCTGAGATGATGGA
AATGTTCTACCTCTGCACTCACTGTCCAGTACATTAGACACTAGGCACATTGGCTGTTAATCACTTGGAATGTGT
TTAGCTTGACTGAGGAATTAAATTTTGATTGTAAATTTAAATCGCCACACATGGCTAGTGGCTACTGTATTGGAG
TGCACAGCTCTAGATGGCTCCTAGATTATTGAGAGCCTCCAAAACAAATCAACCTAGTTCTATAGATGAAGACAT
AAAAGACACTGGTAAACACCAATGTAAAAGGGCCCCAAGGTGGTCATGACTGGTCTCATTGTCAGAAGCTAAG
AATGTACCTTTTTCTGGCCGGGCGTGGTAGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGA

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FIGURE 517

MAHTFRGCSLAFMFIITWLLIKAKIDACKRGDVTVKPSHVILLGSTVNITCSLKPRQGC FHYSRRNKLILYKFDR
RINFHHGHSLSNSQVTGLPLGTTLFVCKLACINSDEIQICGAEIFVGVAP EQPQNLSCIQKGEQGT VACTWERGRD
THLYTEYTLQLSGPKNL TWQKQCKDIYCDYLD FGINLTPE SPESNFTAKVTAVNSLGSSSSLPSTFTFLDIVRPL
PPWDIRIKFQKASVSRCTLYWRDEGLVLLNRLRYRPSNSRLWNMVNVT KAKGRHDLLDLKPFTEYEFQISSKLHL
YKGSWSDWSESLRAQTPEEEPTGMLDVWYMKRHIDYSRQQISLFWKNLSVSEARGKILHYQVTLQELTGGKAMTQ
NITGHTSWTTVIPRTGNWAVAVSAANSKGSSLPTRINIMNLCEAGLLAPRQVSANSEGMDNILVTWQPPRKDPSA
VQEYVVEWRELHPGGDTQVPLNWLRSRPYNVSALISENIKSYICYEIRVYALSGDQGGCSSILGNSKHKAPLSGP
HINAITEEKGSILISWNSIPVQEQMGCLLHYRIYWKERDSNSQPQLCEIPYRVSONSHPINSLQPRVTYVLWMTA
LTAAGESSHGNEREFCLOGKANWMAFVAPSICIAIIMVGIFSTHYFQQKFVLLAALRPQWCSREIPDPANSTCA
KKYPIAEEKTQLPLDRLLIDWPTPEDPEPLVISEVLHQVTPVFRHPPCSNWPQREKGIQGHQASEKDMMHSAASP
PPPRALQAESRQLVDLYKVLESRGSDPKPENPACPWTVLPAGDLPTHGYLPSNIDDLPSHEAPLADSLEELEPQ
HISLSVFPSSSLHPLTFSCGDKLTLDQLKMRCDSLML

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FIGURE 518

CATTGAGAGACAGAAGGTGGATAGACAAATCTCCACCTTCAGACTGGTAGGCTCCTCCAGAAGCCATCAGACAGG
AAGATGTGAAAATCCCCAGCACTCATCCCAGAATCACTAAGTGGCACCTGTCCTGGGCCAAAGTCCCAGGACAGA
CCTCATTGTTCTCTGTGGGAATACCTCCCCAGGAGGGCATCCTGGATTTCCTCCCTTGCAACCCAGGTCAGAAAGT
TTCATCGTCAAGGTTGTTTCATCTTTTTTTTCTGTCTAACAGCTCTGACTACCACCCAACCTTGAGGCACAGTG
AAGACATCGGTGGCCACTCCAATAACAGCAGGTCACAGCTGCTCTTCTGGAGGTGTCCTACAGGTGAAAAGCCCA
GCGACCCAGTCAGGATTTAAGTTTACCTCAAAAATGGAAGATTTTAACATGGAGAGTGACAGCTTTGAAGATTTC
TGGAAGGTGAAGATCTTAGTAATTACAGTTACAGCTCTACCTGCCCTTTTCTACTAGATGCCGCCCCATGT
GAACCAGAATCCCTGGAAATCAACAAGTATTTTGTGGTCATTATCTATGCCCTGGTATTCTGTCTGAGCCTGCTG
GGAAACTCCCTCGTGATGCTGGTCATCTTATACAGCAGGGTCGGCCGCTCCGTCACCTGATGTCTACCTGCTGAAC
CTAGCCTTGGCCGACCTACTCTTTGCCCTGACCTTGCCCATCTGGGCCGCTCCAAGGTGAATGGCTGGATTTT
GGCACATTCTGTGCAAGGTGGTCTCACTCCTGAAGGAAGTCAACTTCTATAGTGGCATCCTGCTACTGGCCTGC
ATCAGTGTGGACCGTTACCTGGCCATTGTCCATGCCACACGCACACTGACCCAGAAGCGCTACTTGGTCAAATTC
ATATGTCTCAGCATCTGGGGTCTGTCTTGTCTCTGGCCCTGCCCTGTCTTACTTTTCCGAAGGACCGTCTACTCA
TCCAATGTTAGCCAGCCTGCTATGAGGACATGGGCAACAATACAGCAAACTGGCGGATGCTGTTACGGATCCTG
CCCCAGTCTTTGGCTTCATCGTGCCACTGCTGATCATGCTGTTCTGCTACGGATTACCCCTGCGTACGCTGTTT
AAGGCCACATGGGGCAGAAGCACCGGGCCATGCGGGTCATCTTGTCTGTCCTCATCTTCTGCTCTGCTGG
CTGCCCTACAACCTGGTCTGCTGGCAGACACCTCATGAGGACCCAGGTGATCCAGGAGACCTGTGAGCGCCGC
AATCACATCGACCGGGCTCTGGATGCCACCGAGATTCTGGGCATCCTTCACAGCTGCCTCAACCCCTCATCTAC
GCCTTCATTGGCCAGAAGTTTCGCCATGGACTCCTCAAGATTCTAGCTATACATGGCTTGATCAGCAAGGACTCC
CTGCCCAAAGACAGCAGGCCTTCCTTTGTTGGCTCTTCTTCAGGGCACACTTCCACTACTCTCTAAGACCTCCTG
CCTAAGTGCAGCCCGTGGGGTTCCTCCCTTCTCTTCACAGTCACATTCCAAGCCTCATGTCCACTGGTTCCTTCTT
GGTCTCAGTGTCAATGCAGCCCCCATTGTGGTTCACAGGAAGTAGAGGAGGCCACGTTCTTACTAGTTTCCCTTGC
ATGGTTTAGAAAGCTTGCCCTGGTGCCTCACCCCTTGCCATAATTACTATGTCAATTTGCTGGAGCTCTGCCCATC
CTGCCCTGAGCCCATGGCACTCTATGTTCTAAGAAGTGAAAATCTACACTCCAGTGAGACAGCTCTGCATACTC
ATTAGGATGGCTAGTATCAAAAGAAAGAAAATCAGGCTGGCCAACGGGGTGAAACCTGTCTCTACTAAAAATACA
AAAAAAAAAAAAAAAAATTAGCCGGGCGTGGTGGTGAAGTGCCTGTAATCACAGCTACTTGGGAGGCTGAGATGGGAGA
ATCATTGAACCCGGGAGCAGAGGTTGCAGTGAGCCGAGATTGTGCCCTGCCATCCAGCCTGAGCGACAGTGAG
ACTCTGTCTCAGTCCATGAAGATGTAGAGGAGAACTGGAACCTCTCGAGCGTTGCTGGGGGGGATTGTAAATGG
TGTGACCACTGCAGAAGACAGTATGGCAGCTTTCCTCAAACTTCAGACATAGAATTAACACATGATCCTGCAAT
TCCACTTATAGGAATTGACCCACAAGAAATGAAAGCAGGGACTTGAACCCATATTTGTACACCAATATTCATAGC
AGCTTATTCACAAGACCCAAAAGGCAGAAGCAACCCAAATGTTTCATCAATGAATGAATGAATGGCTAAGCAAAAT
GTGATATGTACCTAACGAAGTATCCTTCAGCCTGAAAGAGGAATGAAGTACTCATACTGTTACAACACGGACGA
ACCTTGAAAACCTTTATGCTAAGTGAAATAAGCCAGACATCAACAGATAAATAGTTTATGATTCCACCTACATGAG
GTACTGAGAGTGAACAAATTTACAGAGACAGAAAGCAGAACAGTGATTACCAGGGACTGAGGGGAGGGGAGCATG
GGAAGTGACGGTTTAAATGGGCACAGGGTTTATGTTTAGGATGTTGAAAAAGTTCTGCAGATAAACAGTAGTGATA
GTTGTACCGCAATGTGACTTAATGCCACTAAATTGACACTTAAAAATGGTTTAAATGGTCAATTTTGTATGTAT
ATTTTATATCAATTTAAAAAAAACCTGAGCCCCAAAAGGTATTTTAATCACCAGGCTGATTAAACCAAGGCTA
GAACCACCTGCCTATATTTTTTGTAAATGATTTCAATATCTTTTTTTTAAATAAACCATTTTTTACTTGGGT
GTTTAT

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FIGURE 519

MEDFNMESDSFEDFWKGEDLSNYSYSTLPPFLD AAPCEPESLEINKYFVVIYALVFLLSLLGNSLVMLVILY
SRVGRSVTDVYLLNLALADLLFALTLP IWAASKVNGWIFGTFLCKVVSLLKEVNFYSGILLLACISVD RYLAIVH
ATRILTQKRYLVKFICLSIWGLSLLLALPVLLFRRTVYSSNVSPACYEDMGNNTANWRMLLRILPQSFGFIVPLL
IMLCYGFILRTL FKAHMGQKHRAMRVIFAVVLIFLLCWL PYNLVLLADTL MRTQVIQETCERRNHIDRALDATE
ILGILHSCLNPLIYAFIGQKFRHG LLLKILAIHGLISKDSL PKDSRPSFVGSSSGHTSTTL

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FIGURE 520

TTGGGGGTTTATTCTCTTCCCTTCTAACTTGACAGGGTCTTGCTCTGTCATTTCAGGCAAGAGTGCAGTAGTGTGA
TCACTTCTTACTGCCGCCTCAAGCTTCCAGCCTCAACTCAAGCAATCCTCCCACCTCAGCCACCCAAGTGGCTGG
GACTACAGATTAAGAATGACCCAAAATAAATTAAAGCTTTGTTCCAAAGCCAATGTGTATACTGAAGTGCCTGAT
GGAGGATGGGGCTGGGCGGTAGCTGTTTCATTTTTCTTCGTTGAAGTCTTCACCTACGGCATCATCAAGACATTT
GGTGTCTTCTTTAATGACTTAATGGACAGTTTTAATGAATCCAATAGCAGGATCTCATGGATAATCTCAATCTGT
GTGTTTGTCTTAACATTTTCAGCTCCCCCTCGCCACAGTCTTGAGCAATCGTTTCGGACACCGTCTGGTAGTGATG
TTGGGGGGGGCTACTTGTTCAGCACCAGGGATGGTGGCCGCCTCCTTCTCACAAGAGGTTTCTCATATGTACGTCGCC
ATCGGCATCATCTCTGGTCTGGGATACTGCTTTAGTTTTCTCCCAACTGTAACCATCCTATCACAATATTTTGGC
AAAAGACGTTCCATAGTCACTGTCAGTTGCTTCCACAGGAGAATGTTTCGCTGTGTTTGCTTTCGCACCAGCAATC
ATGGCTCTGAAGGAGCGCATTGGCTGGAGATACAGCCTCCTTTCGTGGGCCTACTACAGTTAAACATTGTCTATC
TTCGGAGCACTGCTCAGACCCATCATTATCAGAGGACCAGCGTCACCGAAAATAGTCATCCAGGAAAATCGGAAA
GAAGCGCAGTATATGCTTGAAAATGAGAAAACACGAACCTCAATAGACTCCATTGACTCAGGAGTAGAACTAACT
ACCTCACCTAAAAATGTGCCTACTCACACTAACCTGGAAGTGGAGCCGAAGGCCGACATGCAGCAGGTCCTGGTG
AAGACCAGCCCCAGGCCAAGCGAAAAGAAAGCCCCGCTATTAGACTTCTCCATTTTGAAAGAGAAAAGTTTTATT
TGTTATGCATTATTTGGTCTCTTTGCAACACTGGGATTCTTTGCACCTTCCTTGTACATCATTCCTCTGGGCATT
AGTCTGGGCATTGACCAGGACCGCGCTGCTTTTTTATTATCTACGATGGCCATTGCAGAAGTTTTTCGGAAGGATC
GGAGCTGGTTTTGTCTCAACAGGGAGCCCATTCGTAAGATTTACATTGAGCTCATCTGCGTCATCTTATTGACT
GTGTCTCTGTTTGCTTTACTTTTGCTACTGAATTCTGGGGTCTAATGTCATGCAGCATATTTTTTGGGTTTATG
GTTGGAACAATAGGAGGACTCACATTCCACTGCTTGCTGAAGATGATGTCGTGGGCATTGCAGAAGATGTCTTCT
GCAGCTGGGGTCTACATCTTCATTTCAGAGCATAGCAGGACTGGCTGGACCGCCCCTTGCAGGTTTGTGGTGGAC
CAAAGTAAGATCTACAGCAGGGCCTTCTACTCCTGCGCAGCTGGCATGGCCCTGGCTGCTGTGTGCCTCGCCCTG
GTGAGACCGTGTAAGATGGGACTGTGCCAGCGTCATCACTCAGGTGAAACAAAGGTAGTGAGCCATCGTGGGAAG
ACTTTACAGGACATACCTGAAGACTTTCTGGAAATGGATCTTGCAAAAAATGAGCACAGAGTTCACGTGCAAATG
GAGCCGGTATGACACACTTTCTTACAACAACAGCCACTGTGTTGGCTGGAGAGGGATGGGGTGGGCCCAACGGGG
ACACAAGGAGGCAGAGGAGCTAACCCCTCTACTCCACTTTCAAACTACATTTTAAAGGGAATGTGTATGTGAAG
AGCACTACCAACATCGCTTTTGTGTTTTGTTTTGTTTTGTTTTAAGCTTTTTTTTTTTTGTGTTGTTTTAAAGCCAAA
ACAAAAAACAACCAAGCACTCTTCCATATATAAATCTGGCTGTATTTCAGTAGCAATACAAGAGATATGTAGAAAG
ACTCTTTGGTTTCATTCCGATATTAAATAGTGACATGAACTGGCAAGTGGTTTTTAAAGCTTTCACGTGGGA
TAAATGATTTTCTTTTTTCTTTTCTTTCTTCTTCTATGGTCTTGCTGTAATAAACTACTCTCCTGAATAAAACAAC
ATCCAACCCAGGTCATTGAAATGAAATTGGCCAGTC

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FIGURE 521

MTQNKLKLCSEKAVYTEVPDGGGWAVAVSFFFVEVFYGIKTFGVFFNDLMDSFNESNSRISWIISICVFVLT
FSAPLATVLSNRFGHRLVVMLGGLLVSTGMVAASFQEVSHMYVAIGIISGLGYCFSFLPTVTILSQYFGKRRI
VTAVASTGECFAVFAFAPAIMALKERIGWRYSLFVGLLQLNIVIFGALLRPIIIRGPASPKIVIQENRKEAQYM
LENEKTRTSIDSIDSGVELTTSPKNVPTHNTNLELEPKADMQQVLVKTSRPSEKKAPLLDFSILKEKSFICYALF
GLFATLGFFAPSLYIIPLGISLGIDQDRAAFLSTMAIAEVFGRIGAGFVLNREPIRKIYIELICVILLTVSLFA
FTFATEFWGLMSCSIFFGFMVGTIGGLTFHCLLKMMSWALQKMSSAAGVYIFIQSIAGLAGPPLAGLLVDQSKIY
SRAFYSCAAGMALAAVCLALVRPCKMGLCQRHHSGETKVVSHRGKTLQDIPEDFLEMDLAKNEHRVHVQMEPV

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FIGURE 522

GCGGGGTAGTCGGCGCGAGGCGGAGCTTGGCAGTTCCGTCCACTTCAGCCGCAGCGTCCCTCGCCGGGTGTCTCG
CCGCAGCCTCCGGAGAGGAACAGACCCTCACTCTCTCTGTCAGAAAAATGCTCTGCTCCAGCTCAGCCACCTGCTG
AAGGGACAGAAGGGACTGCCCCAGGTGGGGGTCCCCCTGGCCCTCCTCCTAACATGACCAGTAACAGACGACTAC
AGCAAACCCAGGCACAAGTGGAGGAGGTGGTGGACATCATACGTGTGAACGTGGACAAGGTCTGGAGAGGGACC
AGAAGCTGTCAGAGCTGGATGACCGAGCTGATGCCTTGCAGGCAGGAGCATCACAATTTGAGAGCAGTGCTGCCA
AGCTAAAGAGGAAGTATTGGTGGAAAACTGCAAGATGATGATCATGCTGGGAGCCATCTGTGCCATCATCGTGG
TAGTTATTGTAAGGCGGGACTGAAGAGCTGGAAGAAAGCAGTCAGTACCCTCCCAACGGCCCCCTCGAAGGTCT
CCACTCTCCTCTGGGCTCCTCCTTGCCTAATGCAGGGGGTCAACGCTGGAGAAGAACCACCACTGTCTCGATGT
GTCCCAAGCCTGGAGCGAATCCGTCCTCTTGGCTCTCCAGCCCTATCACAGGAATCATTCTGGGTTTCTGTCC
CTCTGAGGCTCACCAGGTGTAGTTGGCCTTGTTCCTTGGGGGTATTAGCCCTTCTACTTTCTTTCTCACCACCC
TGTACCCCTCTTCTGTGTGCTCTGCTATCCCCCTTTCCTCCCACCACCCATGTGCATGAGCAAATGTGCAACAAA
ACCTGGGACTTTGCAGTCAAATGAAGCTGA

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FIGURE 523

MSAPAQPPAEGTEGTAPGGGPPGPPNMTSNRRLQQTQAQVEEVVDIIRVNVDKVLERDQKLSELDDRADALQAG
ASQFESSAAKLKRKYWWKNCKMMIMLGAICAIIVVVIVRRD

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FIGURE 524

CACACCCTGACAAGCTGCCAGGCAGGTTCTCTTCTCTCACATACTGACCCACGGCTCCACCCTCTCTCCCCTGG
AAAGGACACCATGAGCACTGAAAGCATGATCCGGGACGTGGAGCTGGCCGAGGAGGCGCTCCCCAAGAAGACAGG
GGGGCCCCAGGGCTCCAGGCGGTGCTTGTTTCCTCAGCCTCTTCTCCTTCCTGATCGTGCGAGGCGCCACCACGCT
CTTCTGCCTGCTGCACTTTGGAGTGATCGGCCCCCAGAGGGAAGAGTCCCCAGGGACCTCTCTCTAATCAGCCC
TCTGGCCCAGGCAGTCAGATCATCTTCTCGAACCCCGAGTGACAAGCCTGTAGCCCATGTTGTAGCAAACCCTCA
AGCTGAGGGGCGAGCTCCAGTGGCTGAACCGCCGGGCCAATGCCCTCCTGGCCAATGGCGTGAGAGCTGAGAGATAA
CCAGCTGGTGGTGCCATCAGAGGGCCTGTACCTCATCTACTCCAGGTCCTCTTCAAGGGCCAAGGCTGCCCCCTC
CACCCATGTGCTCCTCACCCACACCATCAGCCGCATCGCCGTCTCCTACCAGACCAAGGTCAACCTCCTCTCTGC
CATCAAGAGCCCCTGCCAGAGGGGAGACCCAGAGGGGGCTGAGGCCAAGCCCTGGTATGAGCCCATCTATCTGGG
AGGGGTCTTCCAGCTGGAGAAGGGTGACCGACTCAGCGCTGAGATCAATCGGCCCCGACTATCTCGACTTTGCCGA
GTCTGGGCAGGTCTACTTTGGGATCATTGCCCTGTGAGGAGGACGAACATCCAACCTTCCCAAACGCCTCCCCTG
CCCCAATCCCTTTATTACCCCCCTCCTTCAGACACCCTCAACCTCTTCTGGCTCAAAAAGAGAATTGGGGGCTTAG
GGTCGGAACCCAAGCTTAGAAGCTTTAAGCAACAAGACCACCACTTCGAAACCTGGGATTCAGGAATGTGTGGCCT
GCACAGTGAAGTGCTGGCAACCACTAAGAATTCAAACCTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGAT
CCCTGACATCTGGAATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGCAGGACTTGAGAAGACCTCA
CCTAGAAATTGACACAAGTGGACCTTAGGCCTTCCTCTCTCCAGATGTTTCCAGACTTCCTTGAGACACGGAGCC
CAGCCCTCCCCATGGAGCCAGCTCCCTCTATTTATGTTTGCCTTGTGATTATTTATTATTTATTATTTAT
TTATTTACAGATGAATGTATTTATTTGGGAGACCGGGGTATCCTGGGGGACCCAATGTAGGAGCTGCCTTGGCTC
AGACATGTTTTCCGTGAAAACGGAGGCTGAACAATAGGCTGTTCCCATGTAGCCCCCTGGCCTCTGTGCCTTCTT
TTGATTATGTTTTTTAAATATTATCTGATTAAAGTTGTCTAAACAATGCTGATTTGGTGACCAACTGTCATCAT
TGCTGAGGCCTCTGCTCCCCAGGGAGTTGTGTCTGTAATCGGCCTACTATTTCAGTGGCGAGAAAATAAGGTTGCT
TAGGAAAGAA

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FIGURE 525

MSTESMIRDVELAEEALPKKTGGPQGSRRCLFLSLFSFLIVAGATTLFCLLHFGVIGPQREESPRDLSLISPLAQ
AVRSSSRTPSDKPVAVVNPQAEGQLQWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKQGQCPSTHV
LLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQ
VYFGIIAL

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FIGURE 526A

CATGGCGGCGACTGCGGCAAAGCGAGAGCCTCGGAGACGCCGCTGCCGCCAGCACAGCCGGAGATCTGAGCCGAC
ACTGGGGGCGAGTCCGCGAGCCCCGCACTCTCTCGATGAGTCGGAGAAGTCCCGTTGTATCAGAGTAAGATGGACG
GTAGCTTTGATTGTGATTGTGGTGAGCTGGAGCCACCTGATCACTAACAAAAGACATCTTCTGTAAACCAACAGC
CGCCAGGCTTCCTGTTGAAATAAATATATAGCAACAAAGGAAAAAAGAAGCAAACGGAAATAGTGCTTACCAG
CACCTTAGAATGATGCTGCTCAGGACCAGTCCAACACTGAATGTATCTGCACTGTGAGGAGAATGTTCATAGAAG
CCTGTTGTGTGCATATTTATTCACCTTTTTGTTAAATGTTAAATCGTTTAGCACGGTAATCTGAGTGCACAGTATG
TCATTTCAATCCGTTTGAGTTTTCTTGTTTTCGTTAAATGTCTGCAGAGTTGCTGCCCTTTCTTGAACATAGAGT
ACTGCAATCTTTTAATTTCTCAATATGAATAGAGCTTTTTGAGCTTTAAATCTAAGGGGAACCTCGACAGGCCTGT
TTGGCATATGCAATGAACATCAAGAAACCATCTTGCTGTGGAAGCATAATTATTTTTCTTCTCCCTTTTTGAAAG
ATCTTTCCTTTTGATGCCAGTTTTCTTCCTTGTTTACACAAGTTCAATTTGAAAGGAAAAGGCAATAGTAAGGGT
TTCAAATGGCAGAGAAATTTGAAAGTCTCATGAACATTCATGGTTTTGATCTGGGTTCTAGGTATATGGACTTA
AAACCATTGGGTTGTGGAGGCAATGGCTTGGTTTTTCTGCTGTAGACAATGACTGTGACAAAAGAGTAGCCATC
AAGAAAATTGTCCTTACTGATCCCCAGAGTGTCAAACATGCTCTACGTGAAATCAAATATTAGAAGACTTGAC
CATGATAACATTGTGAAAGTGTGTTGAGATTCTTGGTCCAGTGGAAGCCAATTAACAGACGATGTGGGCTCTCTT
ACGGAACCTGAACAGTGTGTTACATTGTTTACAGGAGTACATGGAGACAGACTTGGCTAATGTGCTGGAGCAGGGCCCT
TTACTGGAAGAGCATGCCAGGCTTTTCATGTATCAGCTGCTACGGGGGCTCAAGTATATTCACTCTGCAAAATGTA
CTGCACAGAGATCTCAAACCAGCTAATCTTTTCAATTAATACGGAAGACTTGGTGCTGAAGATAGGTGACTTTGGT
CTTGACGGATCATGGATCCTCATTATTTCCATAAGGGTCATCTTTCTGAAGGATTGGTTACTAAATGGTACAGA
TCTCCACGTCTTTTACTTTCTCCTAATAATTATACTAAAGCCATTGACATGTGGGCTGCAGGCTGCATCTTTGCT
GAAATGCTGACTGGTAAAACCTTTTTGTCAGGTGCACATGAACCTGAACAGATGCAGCTGATTTTGAATCTATT
CCTGTTGTACATGAGGAAGATCGTCAGGAGCTTCTCAGCGTAATTCCAGTTTACATTAGAAATGACATGACTGAG
CCACACAAACCTTTAACTCAGCTGCTTCCAGGAATTAGTCGAGAAGCACTGGATTTCCTGGAACAAATTTTGACA
TTTAGCCCCATGGATCGGTTAACAGCAGAAGAAGCACTCTCCCATCCTTACATGAGCATATATTCTTTTCCAATG
GATGAGCCAATTTCAAGCCATCCTTTTCATATTGAAGATGAAGTTGATGATATTTTGCTTATGGATGAAACTCAC
AGTCACATTTATAACTGGGAAAGGTATCATGATTGTGAGTTTTTCAGAGCATGATTGGCCTGTACATAACAACTTT
GATATTGATGAAGTTCAGCTTGATCCAAGAGCTCTGTCCGATGTCACTGATGAAGAAGAAGTACAAGTTGATCCC
CGAAAATATTTGGATGGAGATCGGGAAAAGTATCTGGAGGATCCTGCTTTTGATACCAATTACTCTACTGAGCCT
TGTTGGCAATACTCAGATCATCATGAAAACAAATATTGTGATCTGGAGTGTAGCCATACTTGTAACCTACAAAACG
AGGTATCATCATATTTAGATAACTTAGTTTGGAGAGAGAGTGAAGTTAACCATTACTATGAACCCAAGCTTATT
ATAGATCTTTCCAATTGGAAAGAACAAGCAAAGAAAAATCTGATAAGAAAGGCAAATCAAATGTGAAAGGAAT
GGATTGGTTAAAGCCAGATAGCGCTAGAGGAAGCATCACAGCAACTGGCTGGAAAAAGAAAGGAAAGAAATCAG
GGATTGATTTTGATTCTTTATTGCAGGAACATTTCAGCTTAGTTCCAGCATGAGCCTACTGATGTTGTTGAT
AAATTAATGACTTGAATAGCTCAGTGTCCCAACTAGAATTGAAAAGTTTGATATCAAAGTCAGTAAGCCAAGAA
AAACAGGAAAAAGGAATGGCAAATCTGGCTCAATTAGAAGCCTTGTACCAGTCTTCTTGGGACAGCCAGTTTGTG
AGTGGTGGGGAGGACTGTTTTTTCATAAATCAGTTTTGTGAGGTAAGGAAGGATGAACAAGTTGAGAAGGAAAAC
ACTTACACTAGTTACTTGGACAAGTTCTTTAGCAGGAAAGAAGATACTGAAATGCTAGAACTGAGCCAGTAGAG
GATGGGAAGCTTGGGGAGAGAGGACATGAGGAAGGATTTCTGAACAACAGTGGGGAGTTTCTCTTTAACAAGCAG
CTCGAGTCCATAGGCATCCACAGTTTCACAGTCCAGTTGGGTCAACCTTAAGTCAATACAGGCCACATTAACA
CCTTCTGCTATGAAATCTTCCCTCAAATTCCTCATCAAACATACAGCAGCATTCTGAAACATCTGAACTAAC
ACTCAGCAGACATTTATCTTTGTATTCTTCATGAAATGTGTTTTGTCTTTTTTTTATTACTAGTGTTTAAGTCATT
TTTTACTTGAATCAGATGGTGTCAATTTAGTAAGGATTTTATGAGTTCCTTGTTTTTAAATCCAGACTTTCTTTT
TCTACATGTGAGATAGTTTTCAATTTAACTGGCATGTCAATTTGCACACAAAATAAAGACTAGAGCAAAATAATG
CAACGCAGGAGGAGAAAAGAAATGCACTAAGACAAGAACATTCTCTCATAGAACATTGATCTGTTTTACAGGAAA
CAAACCTTGCTTGAATTTACACAGTGAGACTGTACATAATTGCATGAAAATAGCTATTTTTTCTTAAGACAT
TTTTCAATCATGAATATTTTCAAGTTTTTCACTGTACACATTTCTTAAACACATGATACCAGCAGCAACTGA
AAATGAATGCCGAATTTGGTACACATGTGTTATCTACCTCAAGGTAACAAGAGTATGTGGCAAAACATATACCAC
CCATAGTGCTTCACAAAATGCATTTCTATTTAGCCAGCGTTTATTGTAGTAAACTATTCTTAATAAAACTCACTC
ACTGTTTATAAATGTTCTGGTATGCATTCTTTATAGTGAAGTGTTAATACATCACATCTTATTTATTTTAGCAAA

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FIGURE 526B

TCAGTATATTTTCTGTATTTAATTATAAAAAATTAAGTTAGTTTTTAAAATTTATTTGCAAATATACTTTTTCCA
TTTGGCACTATGGTTTGTTGCCTACCTAGCTGCATCTATAATGTCAGCTTATCCTAAGGCTGTCCACGTACTTAA
TTTACTTAAGTGTTTCAATTTAAGTAACGTGCTCACTGTGTATAGGAATTTGTATTTTGGAGGTGCTTGATCTATC
TACAAAGAAAAATTAATTAGGAATTACTTTATTATAAAATGCTCCTAGAAGTCTTAATTGTGTTTATTTTTTAAA
AAAACAAATGTTAGACTTGTGTGCATGGAAGTAATTAAGGTACATCATTATTGTAGTTTGAAAGTTGTACATGAT
AAGACATTTTGTTTTTACTGTATGTTTTTACTGAATGATCTATTCCCATCCCAAGGCAAGCATGAATAAAATTA
GGTTAAACGTAGCATGTGGCATCGCAGTCTCTTAGAATTTGTTTCATCTATTTTATTTTATTGAATACTGTCTGT
ATCTTTGGTTATCCTGTTTGAAGAAAAAGGACAAATAAAACATGGCCAGCAAATACAAAAA

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FIGURE 527

MAEKFESLMNIHGFDLGSRYMDLKPLGCGGNGLVFSAVDNDCKRVAIKKIVLTDPQSVKHALREIKIIRRLDHD
NIVKVFEILGPSGSQLTDDVGSITELNSVYIVQEYMETDLANVLEQGPLEEHARLFMYQLLRGLKYIHSANVLH
RDLKPANLFINTEDLVLKIGDFGLARIMDPHYSHKGHLSEGLVTKWYRSPRLLLSPPNNYTKAIDMWAAGCIFAEM
LTGKTLFAGAHELEQMQLILESIPVVHEEDRQELLSVIPVYIRNDMTEPHKPLTQLLPGISREALDFLEQILTFS
PMDRLTAEALSHPYMSIYSFPMDEPISSHPFHIEDEVDDILLMDETHSHIYNWERYHDCQFSEHDWPVHNNFDI
DEVQLDPRALSDVTDEEEVQVDPRKYLDGDREKYLEDPAFDTNYSTEPWCQYSDHHENKYCDLECSHTCNYKTRS
SSYLDNLVWRESEVNHYEYEPKLIIDLSNWKEQSKEKSDKKGKSKCERNGLVKAQIALEEASQQLAGKEREKNQGF
DFDSFIAGTIQLSSQHEPTDVVDKLNLDLNSSVSQLELKSLSKSVSQEKQEKGMANLAQLEALYQSSWDSQFVSG
GEDCFFINQFCEVRKDEQVEKENTYTSYLDKFFSRKEDTEMLETEPVEDGKLGERGHEEGFLNNSGEFLFNKQLE
SIGIPQFHSPVGSPLKSIQATLTSPAMKSSPQIPHQTYSSILKHLN

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FIGURE 528

GTAAAGCTAGACCGATCTCCGGGGAGCCCCGGAGTAGGCGAGCGGCGGCCAGCTAGTTGAGCGCACCCCCCG
CCCGCCCCAGCGGCGCCGCGGCGGGCGGCGTCCAGGCGGCATGGAGAAGGACGGCCTGTGCCGCGCTGACCAGCA
GTACGAATGCGTGGCGGAGATCGGGGAGGGCGCCTATGGGAAGGTGTTCAAGGCCCCGCGACTTGAAGAACGGAGG
CCGTTTTCGTGGCGTTGAAGCGCGTGCGGGTGCAGACCGGCGAGGAGGGCATGCCGCTCTCCACCATCCGCGAGGT
GGCGGTGCTGAGGCACCTGGAGACCTTCGAGCACCCCAACGTGGTTCAGGTTGTTTGATGTGTGCACAGTGTACG
AACAGACAGAGAAACCAAATACTTTAGTGTGTTGAACATGTTCGATCAAGACTTGACCACTTACTTGGATAAAGT
TCCAGAGCCTGGAGTGCCCACTGAAACCATAAAGGATATGATGTTTCAGCTTCTCCGAGGTCTGGACTTTCTTCA
TTCACACCGAGTAGTGATCGCGATCTAAAACCACAGAACATTCTGGTGACCAGCAGCGGACAAATAAACTCGC
TGACTTCGGCCTTGCCCGCATCTATAGTTTCCAGATGGCTCTAACCTCAGTGGTCGTCACGCTGTGGTACAGAGC
ACCCGAAGTCTTGCTCCAGTCCAGCTACGCCACCCCCGTGGATCTCTGGAGTGTGGCTGCATATTTGCAGAAAT
GTTTCGTAGAAAGCCTCTTTTTCGTGGAAGTTCAGATGTTGATCAACTAGGAAAAATCTTGACGTGATTGGACT
CCCAGGAGAAGAAGACTGGCCTAGAGATGTTGCCCTTCCCAGGCAGGCTTTTCATTCAAAATCTGCCCAACCAAT
TGAGAAGTTTGTAAACAGATATCGATGAACTAGGCAAAGACCTACTTCTGAAGTGTTTGACATTTAACCCAGCCAA
AAGAATATCTGCCTACAGTGCCCTGTCTCACCATACTTCCAGGACCTGGAAAGGTGCAAAGAAAACCTGGATTTC
CCACCTGCCGCCCAGCCAGAACACCTCGGAGCTGAATACAGCCTGAGGCCTCAGCAGCCGCCTTAAGCTGATCCT
GCGGAGAACACCCTTGGTGGCTTATGGGTCCCCCTCAGCAAGCCCTACAGAGCTGTGGAGGATTGCTATCTGGAG
GCCTTCCAGCTGCTGTCTTCTGGACAGGCTCTGCTTCTCCAAGGAAA

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FIGURE 529

MEKDGLCRADQQYECVAEIGEGAYGKVFKARDLKNGGRFVALKRVRVQTGEEGMPLSTIREVAVLRHLETFEHPN
VVRLFDVCTVSRTDRETKLTLVFEHVDQDLTTYLDKVPEPGVPTETIKDMMFQLLRGLDFLHSHRVVHRDLKPQN
ILVTSSGQIKLADFGFLARIYSFQMALTSVVVTLWYRAPEVLLQSSYATPVDLWSVGCIFAEMFRRKPLFRGSSDV
DQLGKILDVIGLPGEEDWPRDVALPRQAFHSKSAQPIEFVTDIDELGKDLLKCLTFNPAKRISAYSALSHPYF
QDLERCKENLDShLPPSQNTSELNTA

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FIGURE 530

GTCTGCCCTCTCTGCTCGCCCTGCCTAGCTTGAGGATCTGTCACCCCAGCCATCAGGATTATCGCCCTCCTCGCT
GCTATTCTCTTGGTAGCCCTCCAGGTCCGGGCAGGCCCCTCCAGGCAAGAGGTGATGAGGCTCCAGGCCAGGAG
CAGCGTGGGCCAGAAGACCAGGACATATCTATTTCTTTGCATGGGATAAAAGCTCTGCTCTTCAGGTTTCAGGC
TCAACAAGGGGCATGGTCTGCTCTTGCAATTAGTATTCTGCCGGCGAACAGAACTTCGTGTTGGGAAGTGCCTC
ATTGGTGGTGTGAGTTTCACATACTGCTGCACGCGTGTGATTAACGTTCTGCTGTCCAAGAGAATGTCATGCTG
GGAACGCCATCATCGGTGGTGTAGCTTCACATGCTTCTGCAGCTGAGCTTGCAGAATAGAGAAAAATGAGCTCA
TAATTGCTTTGAGAGCTACAGGAAATGGTTGTTTCTCCTATACTTTGTCCTTAACATCTTTCTTGATCCTAAAT
ATATATCTCGTAACAAG

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FIGURE 531

MRIALLAAILLVALQVRAGPLQARGDEAPGQEQRGPEQDISISFAWDKSSALQVSGSTRGMVCSCRLVFCRRT
ELRVGNCLIGGVSTYCTRVD

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FIGURE 532

CAGTCTCAATGGGGGGCACTGGGGCTGGAGGGCAGGGGTGGGAGGCTCCAGGGGAGGGGTCCCTCCTGCTAGCTG
TGGCAGGAGCCACTTCTCTGGTGACCTTGTTGCTGGCGGTGCCTATCACTGTCCTGGCTGTGCTGGCCTTAGTGC
CCCAGGATCAGGGAGGACTGGTAACGGAGACGGCCGACCCGGGGGCACAGGGCCAGCAAGGACTGGGGTTTCAGA
AGCTGCCAGAGGAGGAGCCAGAAACAGATCTCAGCCCCGGGCTCCCAGCTGCCCACCTCATAGGCGCTCCGCTGA
AGGGGCAGGGGCTAGGCTGGGAGACGACGAAGGAACAGGCGTTTCTGACGAGCGGGACGCAGTTCTCGGACGCCG
AGGGGCTGGCGCTCCCGCAGGACGGCCTCTATTACCTCTACTGTCTCGTCGGCTACCGGGGCCGGGCGCCCCCTG
GCGGCGGGGACCCCCAGGGCCGCTCGGTACGCTGCGCAGCTCTCTGTACCGGGCGGGGGCGCCTACGGGCCGG
GCACTCCCGAGCTGCTGCTCGAGGGCGCCGAGACGGTGACTCCAGTGCTGGACCCGGCCAGGAGACAAGGGTACG
GGCCTCTCTGGTACACGAGCGTGGGGTTCGGCGGCCTGGTGACGCTCCGGAGGGGCGAGAGGGTGTACGTCAACA
TCAGTCACCCCGATATGGTGGACTTCGCGAGAGGGAAGACCTTCTTTGGGGCCGTGATGGTGGGGTGAGGGAATA
TGAGTGCGTGGTGCGAGTGCGTGAATATTGGGGGCCCGGACGCCCAGGACCCCATGGCAGTGGGAAAAATGTAGG
AGACTGTTTGAAAATTGATTTTGAACCTGATGAAAATAAAGAATGGAAAGCTTCAGTGCTGCCGATAAA

b

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FIGURE 533

MGALGLEGRGGRLQGRGSLLLAVAGATSLVTLLAVPITVLAVLALVPDQGGLGFRSCQRRSQKQISAPGSQLP
TS

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FIGURE 534

CCCAGAGCAGCGCTCGCCACCTCCCCCGGCCTGGGCAGCGCTCGCCCGGGAGTCCAGCGGTGTCCTGTGGAGC
TGCCGCCATGCCCCGCGGCGGGCGCGGGCTGCCGGAACCTCGGTCTCCCGGCGCTGCTACTGCTGCTGCTGCT
CCGGCCGCGGCGACGCGGGGCATCACGTGCCCTCCCCCATGTCCGTGGAACACGCAGACATCTGGGTCAAGAG
CTACAGCTTGTA^{CT}CCAGGGAGCGGTACATTTGTA^{CT}CTGGTTTCAAGCGTAAAGCCGGCACGTCCAGCCTGAC
GGAGTGCGTGTTGAACAAGGCCACGAATGTCGCCCAGTGGACAACCCCCAGTCTCAAATGCATTAGAGACCCTGC
CCTGGTTACCAAAGGCCAGCGCCACCCTCCACAGTAACGACGGCAGGGGTGACCCACAGCCAGAGAGCCTCTC
CCCTTCTGGAAAAAGAGCCCGCAGCTTCATCTCCAGCTCAAACAACACAGCGGCCACAACAGCAGCTATTGTCCC
GGGCTCCCGAGCTGATGCCTTCAAAATCACCTTCCACAGGAACCAAGAGATAAGCAGTCATGAGTCTCCACGG
CACCCCTCTCAGACAACAGCCAAGAACTGGGAACTCACAGCATCCGCCTCCCACCAGCCGCCAGGTGTGTATCC
ACAGGGCCACAGCGACACCAGTGTGGCTATCTCCACGTCCACTGTCTGTGTGTGGGCTGAGCGCTGTGTCTCT
CCTGGCATGCTACCTCAAGTCAAGGCAAACCTCCCCCGCTGGCCAGCGTTGAAATGGAAGCCATGGAGGCTCTGCC
GGTGACTTGGGGGACCAGCAGCAGAGATGAAGACTTGGAAAACTGCTCTCACCACCTATTGAAACTCGGGGAAACC
AGCCCAGCTAAGTCCGGAGTGAAGGAGCCTCTCTGCTTTAGCTAAAGACGACTGAGAAGAGGTGCAAGGAAGCGG
GCTCCAGGAGCAAGCTCACCAGGCCTCTCAGAAGTCCCAGCAGGATCTCACGGACTGCCGGGTGCGCGCCTCCTG
CGCGAGGGAGCAGGTTCTCCGCATTCCCATGGGCACCACCTGCCTGCCTGTCGTGCCTTGGACCCAGGGCCAGC
TCCCAGGAGAGACCAAAGGCTTCTGAGCAGGATTTTATTTTATTACAGTGTGAGCTGCCTGGAATACATGTGG
TAATGAAATAAAAACCCTGCCCCGAATCTTCCGTCCCTCATCCTAACTTGCAGTTCACAGAGAAAAGTGACATAC
CCAAAGCTCTCTGTCAATTACAAGGCTTCTCCTGGCGTGGGAGACGTCTACAGGGAAGACACCAGCGTTTGGGCT
TCTAACCACCCTGTCTCCAGCTGCTCTGCACACATGGACAGGGACCTGGGAAAGGTGGGAGAGATGCTGAGCCCA
GCGAATCCTCTCCATTGAAGGATTGAGGAAGAAGAAAACCTCAACTCAGTGCCATTTTACGAATATATGCGTTTAT
ATTTATACTTCCTTGTCTATTATATCTATACATTATATATTATTTGTATTTTGACATTGTACCTTGTATAAACAA
AATAAAACATCTATTTTCAATATTTTTTAAAATGCA

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FIGURE 535

MAPRRARGCRTLGLPALLLLLLLRPPATRGITCPPPMSVEHADIWVKSYSLYSRERYICNSGFKRKAGTSSLTEC
VLNKATNVAHWTTPSLKCIRDPALVHQRPAAPPSTVTTAGVTPQPESLSPSGKEPAASSPSSNNTAATTAAIVPGS
QLMPSPSPSTGTTEISSHESHGTPSQTTAKNWELTASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLA
CYLKSRTPTPLASVEMEAMEALPVTWGTSSRDEDLNCSHHL

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FIGURE 536

CTGAAGCTTGCATGCCTGCAGGTCGACCCACGCGTCCGCGGACGCGTGGGCGGACGCGTGGGTTTTTCTTTCTT
CCAGAAGGAGATTTAACCATAGTAGAAAGAATGGAGAACTATTAAGTGCCTTCCTTCTGTGGGCTGTGATTTTCA
GAGGGGAATGCTAAGAGGTGATTTTCAATGTTGGGACTCAAAGGTGAAGACACTGAAGGACAGAATTTTGGCAG
AGGAAAGATCTTCTTCGGTCACCATACTTGAGTTAGCTCTAGGGAAAGTGGAGGTTTCCATTTGGAATTCTATAGC
TTCTTCCAGGTCATAGTGTCTGCCCCCACCTTCCAGTATCTCCTGATATGCAGCATGAATGAAAATGGCAAGTT
TCCTGGCCTTCCTTCTGCTCAACTTTCGTGTCTGCCTCCTTTTGCTTCAGCTGCTCATGCCTCACTCAGCTCAGT
TTTCTGTGCTTGGACCCTCTGGGCCATCCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGTACCTGTTCC
CGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTGAGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAG
ATGGAAAGGAAGTGGAAAGACAGGCAGAGTGCACCGTATCGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTG
CAGGGAAGGCTGCTCTCCGAATACACAACGTACAGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATG
GTGACTTCTATGAAAAAGCCCTGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTGATCTTCACGTTGATGTGAAGG
GTTACAAGGATGGAGGGATCCATCTGGAGTGCAGGTCCACTGGCTGGTACCCCCAACCCCAATACAGTGGAGCA
ACAACAAGGGAGAGAAACATCCCAGCTGTGGAAGCACCTGTGGTTGCAGACGGAGTGGGCCTGTATGCAGTAGCAG
CATCTGTGATCATGAGAGGCAGCTCTGGGGAGGGTGTATCCTGTACCATCAGAAAGTTCCTCCTCGGCCCTGGAAA
AGACAGCCAGCATTTCCATCGCAGACCCCTTCTTCAGGAGCGCCAGAGGTGGATCGCCGCCCTGGCACGGACCC
TGCTGTCTTGCTGTCTGCTTCTTGGGGGAGCCGGTTACTTCTGTGGCAACAGCAGGAGGAAAAAAGACTCAGT
TCAGAAAGAAAAAGAGAGAGCAAGAGTTGAGAGAAATGGCATGGAGCACAATGAAGCAAGAACAAGCACAAAGAG
TGAAGCTCCTGGAGGAACTCAGATGGAGAAGTATCCAGTATGCATCTCGGGGAGAGAGACATTACGCCTATAATG
AATGGAAGAAAGCCCTCTTCAAGCCTGCGGATGTGATTCTGGATCCAAAAACAGCAAAACCCCATCCTCCTTGTTT
CTGAGGACCAGAGGAGTGTGCAGCGTGCCAAGGAGCCCCAGGATCTGCCAGACAACCCCTGAGAGATTTAATTGGC
ATTATTGTGTTCTCGGCTGTGAGAGCTTCATATCAGGGAGACATTACTGGGAGGTGGAGGTAGGGGACAGGAAAG
AGTGGCATATAGGGGTGTGCAGTAAGAATGTGCAGAGAAAAGGCTGGGTCAAAATGACACCTGAGAATGGATTCT
GGACTATGGGGCTGACTGATGGGAATAAGTATCGGACTCTAAGTGGAGCCAGAACCAACCTGAAACTTCCTAAGC
CCCCTAAGAAAGTGGGGGTCTTCTGGACTATGAGACTGGAGATATCTCATTCTACAATGCTGTGGATGGATCGC
ATATTCTACTTTCTCGGACGTCTCCTTCTCTGAGGCTCTATATCCTGTTTTTCAAGATTTTGACCTTGGAGCCCA
CGGCCCTGAGTATTTGTCCAGCGTGAAGAAAGAGAGAGTTCCTCCAATTCTGACCGAGTGCTGATCATTCCCT
AGAGACACCAGTAACCCCGGGCTTAGCTAACGAAAGTGGGGAGCCTCAGGCTGAAGTAACTTTTCTCTGCTTCTC
CCTGCCAGCTCAGAGCTGAGGGCCTCCCCCTCCACAGCAACCAATCACAACCATAAAGCTACAAGCACGCACTG
AAGCACTTTACTGATACTCATTCAATTATTATCATATGACAGTTGTTTGGAGTTTGGTACCATCTTATTTTCCCCTTA
TACAGATAAGGAACTGGGGTGCAGAAAAGTGAATTGACTACAAAGTAGACATGACTAGTTAACAACACAGCTGG
GATCTAAACAGCAATAACTAATTAATGGAGAAGTAAATGCTCTGAGTGTCTGTGTTATGAGCTTTGGTGGAT
GTCACCTCTTAATCCTCGCAACACCCGTGTCGGGTAGTCTCATTAGCAAGTATGGAAGTTGAGGCAGGGCAACA
TTAAGCAACTTACATAACTCATGCAGTAATTTCTGCAGTTGGGAGATGTTTCAAGTTCAGTCCCCGGCCCTATGGC
CGTTCTTTTCCACCCTGTTTCTTCCCCCATAGGAAGAACCACCTGTAGCCCTGAGGTTCTTTTCCAGGATGGC
TCCAGGATAAGGATCACTGTAGGTGGTTGTGGAGTTGACACCCCTGTTGACTCCTTCCAGCTGATTGTCAGAGC
CTTAGACCCAGCACGCTTGGATTAGCTTTCAGAGTGTCTTGGTTGAGAGAATAACCTCACCGTACCCACATGA
CACGTGATTTGGAAGAGACTAGAGGCCACACTTGATAAATCATGGGGAACAGATGTGTTCCACCCAACAAATGT
GATAAGTGATCATGCAGCCAGAGCCAGCCTTCTTCAATCAAGGTTTCCAGGCAGAGCAAAATACCCCTAGAGATT
TCTGTGATATAGGAAATTTGGATGAAGGGAGCTAGAAGAAATACAGGGATTTTTTTTTTTTTTTTAAAGATGGAGTC
TTACTCTGTTGCTAGGCTGGAGTGCAGTGGTGCAGTCTCAGCTCCCTGCAACCTCCACCTCCTGGGTTCAAACAA
TTCTCCTGCCTCAGCCTCCCGAGTACTGGGAATATAGGTGCACGCCACCACACCCAACAAATTTTGTACTTTTA
GTACAGATGAGGGTTCACTATGTTGGCCAGGATGGTCTCGATCTCTTGACCTCATGATCCACCCACCTCGGTCTC
CCAAAGTGCTGGGATTACAGGCTTGAAGCCACCGGGTGACCGGCTTACAGGGATATTTTTTAATCCCGTTATGGACT
CTGTCTCAGGAGAGGGGTCTATCCACCCCTGCTCATTGGTGGATGTTAAACCAATATTCCTTTCAACTGCTGCC
TGCTAGGGAAAACTACTCCTCATTATCATCATTATTATGCTCTCCACTGTATCCCTCTACCTGGCATGTGCT
TGTCAGTTCTAGTTGTTCAATAAATTTGTTAATAATGCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 537

MKMASFLAFLLLNFRVCLLLLQLLMPHSAQFSVLGPSGFILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDYFYEKALVELKVAALGSDL
HVDVKGYKDGGIHLECRSTGWYPQPQIQWSNNKGENIPTVEAPVVADGVGLYAVAASVIMRGSSGEGVSTIRSS
LLGLEKTASISIA DPFFRSAQRWIAALARTLPVLLLLLGGAGYFLWQQQEEKKTQFRKKKREQELREMAWSTMKQ
EQSTRVKLLEELRWRSIQYASRGERHSAYNEWKKALFKPADVILDPKTANPILLVSEDQRSVQRAKEPQDLDPNP
ERFNWHYCVLGCEFSISGRHYWEVEVGDRKEWHIGVCSKNVQRKGWVKMTPENGFWTMGLTDGNKYRTLTEPRTN
LKLPPKPPKKVGVFLDYETGDISFYNAVDGSHIHTFLDVSFSEALYPVFRILTLEPTALSICPA

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FIGURE 538

GGCACGAGGGGAGTGGAAGTTCTCCGGCAGCCCTGAGATCTCAAGAGTGACATTTGTGAGACCAGCTAATTTGA
TTAAAATTCTCTTGGAATCAGCTTTGCTAGTATCATACCTGTGCCAGATTTTCATCATGGGAAACAGCTGTTACAA
CATAGTAGCCACTCTGTTGCTGGTCCTCAACTTTGAGAGGACAAGATCATTGCAGGATCCTTGTAGTAACTGCCC
AGCTGGTACATTCTGTGATAATAACAGGAATCAGATTTGCAGTCCCTGTCCTCCAAATAGTTTCTCCAGCGCAGG
TGGACAAAGGACCTGTGACATATGCAGGCAGTGTAAGGTGTTTTCAGGACCAGGAAGGAGTGTTCTCCACCAG
CAATGCAGAGTGTGACTGCACTCCAGGGTTTCACTGCCTGGGGGCAGGATGCAGCATGTGTGAACAGGATTGTAA
ACAAGGTCAAGAAGTACAAAAAAGGTTGTAAAGACTGTTGCTTTGGGACATTTAACGATCAGAAACGTGGCAT
CTGTCGACCCTGGACAAACTGTTCTTTGGATGGAAAGTCTGTGCTTGTGAATGGGACGAAGGAGAGGGACGTGGT
CTGTGGACCATCTCCAGCCGACCTCTCTCCGGGAGCATCCTCTGTGACCCCGCCTGCCCCTGCGAGAGAGCCAGG
ACACTCTCCGCAGATCATCTCCTTCTTTCTTGCGCTGACGTGCACTGCGTTGCTCTTCTGCTGTCTTCTCCTCAC
GCTCCGTTTCTCTGTTGTTAAACGGGGCAGAAAGAACTCCTGTATATATTCAAACAACCATTTATGAGACCAGT
ACAACTACTCAAGAGGAAGATGGCTGTAGCTGCCGATTTCCAGAAGAAGAAGGAGGATGTGAAGTGTGA
TGGAAGTCAATAGGGCTGTTGGGACTTTCTTGAAAAGAAGCAAGGAAATATGAGTCATCCGCTATCACAGCTTTC
AAAAGCAAGAACACCATCCTACATAATACCCAGGATTCCCCAACACACGTTCTTTTCTAAATGCCAATGAGTTG
GCCTTTAAAAATGCACCACTTTTTTTTTTTTTTTTGACAGGGTCTCACTCTGTACCCAGGCTGGAGTGCAGTGGC
ACCACCATGGCTCTCTGCAGCCTTGACCTCTGGGAGCTCAAGTGATCCTCCTGCCTCAGTCTCCTGAGTAGCTGG
AACTACAAGGAAGGGCCACCACACCTGACTAACTTTTTTGTTTTTTGTGGTAAAGATGGCATTTACCATGTT
GTACAGGCTGGTCTCAAACCTTAGGTTCACTTTGGCCTCCCAAAGTGCTGGGATTACAGACATGAAGTGCAGG
CCCGGCCAAAATAATGCACCACTTTTAACAGAACAGACAGATGAGGACAGAGCTGGTGATAAAAAAAAAAAAAA
AAAGCATTTTCTAGATACCACTTAACAGGTTTGAGCTAGTTTTTTTTGAAATCCAAAGAAAATTATAGTTTAAATT
CAATTACATAGTCCAGTGGTCCAACCTATAATTATAATCAAATCAATGCAGGTTTGTGTTTTTGGTGCTAATATGA
CATATGACAATAAGCCACGAGGTGCAGTAAGTACCCGACTAAAGTTTCCGTGGGTTCTGTCATGTAACACGACAT
GCTCCACCGTCAGGGGGGAGTATGAGCAGAGTGCCTGAGTTTAGGGTCAAGGACAAAAAACCTCAGGCCTGGAGG
AAGTTTTGGAAAGAGTTCAAGTGTCTGTATATCCTATGGTCTTCTCCATCCTCACACCTTCTGCCTTTGTCTGCTGC
TCCCTTTTAAGCCAGGTTACATTCTAAAAATTCTTAACCTTTTAACATAATATTTTATACCAAAGCCAATAAATGA
ACTGCATATGAAA

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FIGURE 539

MGNSCYNIVATLLLVLNFERTRSLQDPCSNCPAGTFCDNNRNQICSPCPPNSFSSAGGQRTCDICRQCKGVFRTR
KECSSTSNAECDCTPGFHCLGAGCSMCEQDCKQGQELTKKGCKDCCFGTFNDQKRGICRPWTNCSLDGKSVLVNG
TKERDVVCGPSPADLSPGASSVTPPAPAREPGHSPQIISSFFLALTSTALLFLLFFLTTLRFVSVVKGGRKKLLYIFK
QPFMRPVQTTQEEDGCSCRFPEEEEGGCEL

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FIGURE 540A

ACGGCTGCGAGAAGACGACAGAAGGGGAGAGGTGAATATTATTGAATGAAAATGGCTGACAGAAGTGGGAAGATT
ATTCCAGGACAAGTGTATATTGAGGTGGAATATGATTATGAATATGAAGCAAAGGACAGAAAGATTGTGATAAAA
CAAGGGGAGAGGTACATCTTGGTGAAAAAGACCAATGATGACTGGTGGCAAGTCAAGCCAGATGAAAACTCCAAA
GCGTTTTATGTGCCAGCCCAGTATGTGAGGGAGGTCACGCGCAAAGCTCTCATGCCACCTGTTAAGCAGGTAGCT
GGTCTGCCAAATAACTCCACGAAAATAATGCAGAGTTTGCATCTTCAGAGATCAACAGAAAATGTGAACAAATTG
CCTGAGCTTTCAAGTTTCGGAAAGCCATCGTCATCTGTTCAAGGAACAGGTCTTATTTCGTGATGCCAATCAGAAT
TTTGGACCCAGTTATAATCAAGGTCAGACTGTCAACCTAAGCCTGGACCTGACCCATAATAACGGAAAGTTTAAAC
AATGACTCACATTCTCCTAAAGTTTCCAGCCAGAATAGGACACGCTCATTGTTGTCATTTTCCCGGTCCAGAGTTC
TTGGATGTAGAGAAAAGTAGCTTCTCCAGGAACAATCTTGTGATTCCGCAGGAGAAGGCTCTGAAAGAATACAT
CAAGATTCTGAATCTGGTGTGAACCTTAGCAGCAGCTCCACTGAACAGATAAGGGCAACCACACCTCCAAATCAA
GGAAGGCCAGATTCTCCTGTCTATGCTAACCTTCAAGAACTGAAAATATCCAGTCTGCTCTTCCCCCACTTCTT
GGGAGCCCGGCAATTGAGTTAATGGAGAATGGGAAACTCATAAAGACAGCTCAGGGCGTTGCTATTACTATAAC
AGAGGGACACAGGAAAGAACTTGGAAACCTCCTCGTTGGACCCGGGATGCAAGCATCAGCAAAGGAGATTTCCAA
AATCCAGGGGATCAAGAGTGGCTCAAGCATGTTGATGATCAAGGTAGACAATATTACTACAGTGCAGACGGATCT
CGGTGAGAATGGGAATTGCCAAAGTATAATGCTTCATCCAGCAGCAAAGAGAAATAATTAAGAGTAGGAGCCTG
GACAGGCGGCTGCAAGAACCAATAGTATTAACAAAGTGGAGACATAGCACCATTGTATTGGACACTAATGATAAG
GAATCTCCAACCTGCCTCAAAACCTGCTTTTCTGAAAATGAGTCTTCTCCCTCCTCACCAAAGCACCAAGATACA
GATCAAGAGAAATATGGATTATTAATGTAACAAAAATGCTGAAAATGGGAAAAGGTTGAAAGAACTGGTTG
TCTTCTTGGGCGGTGTTGCAGGGTTCATCTTTACTTTTACCAAACTCAAGGAAGTAGCACAAGTTGGTTTGGC
AGTAATCAGTCCAAACCAGAGTTCACAGTGGACCTCAAGGGGGCAACAATTGAGATGGCTTCAAAGGATAAATCC
AGCAAAAAGAATGTATTTGAGCTGAAAACCTCGTCAAGGAACAGAACTGCTAATTCAGTCTGACAATGACACTGTT
ATTAATGATTGGTTTTAAAGTTCTTAGTAGTACAATCAATAATCAGGCAGTAGAACTGATGAAGGAATTGAAGAG
GAGATACCGGATTACCAGGAATAGAAAAGCATGATAAGAAAAGGAACAAAAGGATCCCAAAAAGCTTTCGTTCC
TTTAAAGTATCTAGCATAGATTCTTCAGAACAGAAAAAACCAAGAAAACTTAAAGAAGTTTCTTACACGACGC
CCCCTTTGCAAGCTGTTTCGTGAAAAGGTTATATTAAAGATCAGGTATTTGGATCCAATCTCGCTAATCTGTGT
CAGAGAGAGAATGGCACAGTACCAAAGTTTGTGAAGTTATGTATTGAACATGTTGAAGAACATGGTTTTGGATATT
GATGGGATATACAGAGTAAGTGGCAACCTCGCAGTGATCCAGAAAATAAGGTTTGCAGTCAATCATGATGAGAAA
TTGGACTTGAATGACAGTAAATGGGAAGATATTCATGTCTACTGAGGCCCTCAAAATGTTTTTCGAGAATTA
CCAGAACCTCTTTTTTACATTTAATCATTTTTAATGATTTTTGTAAATGCAATTAAGCAAGAACCAAGACCGCGAGTC
GCTGCTGTTAAGGACCTAATCAGACAGTTGCCAAAGCCAAACCAAGACACAATGCAGATTCTTTTCCGACATCTC
AGAAGAGTTATAGAAAATGGAGAGAAAAATCGAATGACCTATCAGAGTATAGCAATTGTTTTTGGTCCCCTCTA
TTAAAACAGAAAAAGAGACTGGTAATATAGCAGTTTCATACTGTGTACCAGAATCAGATTGTAGAATTAATTCTT
CTGGAAGTGAAGTTCCATCTTCGGACGTTGATTCTTACTGAAGACAACCTGTGGAATAGAAGCTGGATTCCATCAG
ATTTCAAATGTTTATACACAATGTATTTTTATTTTTTGGACCAAGCAGTGACTCTTTGATTTTGCATTTTTTTTT
GAGGGATCAGAAGGGAAGGGGAGAGTGCAGATGTGTGTTAGGCCCTCATATTTGCTGCTTTGTTGCAAGTTGATA
TAACTGCGTGTAATTATGAATTCATTTTTATCCTGAATGTTTGCATTTCTACTCTGAATTTTCAAGTAAATCAAA
ACTTAAAAATTCTAACCAGTCATATACACTGGATAATTTGGTAAGAAAACCTGTATTTTTTTTCCCTGAAATTGGAT
AATGTACTTTCTTCTCAAGATTCATGACTTGATAGAACAATACTTTCAGTTATGTTGCAAAGGCTCTTGGGCATT
TTAAACAAAAATGAAGTATATCCATTTTGAAACCTGTGTATTTCTTTTTCGGGGTTTCTGCATGCAGTGGCAGTCT
TAAGTGCCAAAATTCATTATAACCCCAAAATAACCCCTTGATGAAGGCTTGCTGTCTTTTACTGTGTTACACAGC
ATCCTTACTGGATATCTTAGTTGCTTGTGTTGGGCAGCACACTAATATTACTTAAACACTGTGATATACTGGAGT
TTTAGTTAGCGGAAGTCAGTTCAGGGCATTTTAGGGCTGTCTTGCTATACTGAATTGTAGCTAACAACTCCTAATT
ATATCTAGTACCATACTGAGTTATTGGTATGACCCTGTGGAAACACACATTATTTTATGTAAATATAGGCTAAAG
ACTTAATGTCCTTTAGCTTGTGTATATAATTGTGTTGTATAGTCTCAGAGTACATTCTAACCTACATTTCTAAT
CATGTTATTGGTAATCTTTTCTGTGAATATTAGGTTTCTCCAGAAAATAGTCCGTTATTTGGGAAAGTTAACTG
TGTGCACTTTTAGATATTAACCTACATTTACAGGCAAATCACTGTAATGAGAATGGTACTGGAAAATACTGAATA
GACTTGCTAAATGGCACATGCACTACAAGAGGAACCTTTTGGGTTATTTAATATGTACAGAAAACATTAGAAAAA
ATTTATTACAGAATTCTAATTCAGTATGAATAGTGGAAACCCACCTGTAAATTAGATGGATGTTGGATGGAAAA

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FIGURE 540B

TGACATTGCTAAATTTGAGAATTTCTTTTTACCTACTAATGTAGATTGCTTTGTATAATAAAACACAGGGTTTGG
AAGGTTTTGTTACAGGGAGCATGGTCTGTTGAAGATTTTTTAAAATGTATTTTCTAGATTAACTTCTGTACATGA
AATGTCTAATAAACTCTAAGAGGCTTAGAGATTTTTCCATTGGAAATGTGCATTTTGTTTTCTAATTTTTTTGT
TTTTTCATTTACTGGCATACTGTTATACCTCATTTTTTAAAAATCAACTGAATCCAATATTTCTGTGGCAAATAA
CACTTTCCTCATTTTCATACCTTTTCTCCTCTCTTCCATGCCAACATTTCTCCACCCACAACGTACACTTTTTATT
TCTCCATCAATATTTGAAAGCGAGTGATTTGTGACCAGGATTTTTTTTTCTTAGGGTTGCATTTATAATTTACAG
ATTGCCTTCCTTGGGAACAAGTATTTTTTTGTATGATCTGTCTAAAAACCTCTCACCTGAATTTTGTGGTAGAAA
GTCTGTATTTGTTGTTGTGAGCGTGTAAATTGATAACAAACCAAACTACTTGATAGCTAAAGCAGATTGTTTCG
GGTGGGGAGAAAAAGCCCTAAATCAGAAATGTTTATATTTGCCTAAAGTTGTCCTTAATAATACAATATGCTTTAG
ATCTTGCTTATTTAGTGATTGTATACCAGGAAAACAATTAGACTCAAATCAGTGATGTTCTTGTTCTTGGTGTTT
ATGAACATATATCAAAGATTAAAATTGTCCTGTGTTTCTTGTTTCAAGGTACGTGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGTGAAGTCTTAAATGTTTTATTAGTCTACAGCTAATCAGTTTATTGTAATATTGTATGTA
CAGTGAGATTAAATGTCTTGCGTTTTTCATCCTTTGTGAATTAATAATCTCACTTGTTTTGTAATAACAAAGCTAG
TAATATTTTCTGTCTTGACAGCTTGGTTTTATAGTAGAAAAATATATTAAGCTGAAATAAATTATCAGTGGA
TTTTAAAAAAGAAAAAAAAAAAAAAAAAAAA

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FIGURE 541

MKMADRSGKIIPGQVYIEVEYDYEYEAKDRKIVIKQGERYILVKKTNDWWQVKPDENSKAFYVPAQYVREVT
ALMPVVKQVAGLPNNSTKIMQSLHLQRSTENVNKLPELSSFGKPSSSVQGTGLIRDANQNFGPSYNQGQTVNLSL
DLTHNNGKFNNDSHSPKVSSQNRTRSFHFGPEFLDVEKTSFSQEQSCDSAGEGSEIRHQDSESGDELSSSSTE
QIRATTPPNQGRPDSPVYANLQELKISQSALPPLPGSPAIIQINGEWETHKDSGRCYYYNRGTQERTWKPPRWTR
DASISKGDFQNPQDQEWLKHVDDQGRQYYSADGSRSEWELPKYNASSQQQREIIKSRLDRRLQEPVLTWKWRH
STIVLDTNDKESPTASKPCFPENESSPSSPKHQDTDQEKYGLLNVTKIAENGKKVRKNWLSSWAVLQGSLLFTK
TQGSSTSWFGSNQSKPEFTVDLKGATIEMASKDKSSKKNVFELKTRQGTELLIQSDNDTVINDWFKVLSSTINNO
AVETDEGIEEEEIPDSPGIEKHDKEKEQKDPKKLRSFKVSSIDSSEQKKTKKNLKKFLTRRPTLQAVREKGYIKDQ
VFGSNLANLCQRENGTVPKFVKLCIEHVEEHGLDIDGIYRVSGNLAVIQKLRFVAVNHDEKLDLNDKWDIHVIT
GALKMFFRELPEPLFTFNHFNDFVNAIKQEPRPRVAVKDLIRQLPKPNQDTMQILFRHLRRVIENGEKNRMTYQ
SIAIVFGPTLLKPEKETGNIAVHTVYQNQIVELILLELSSIFGR

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FIGURE 542

ATGACCATGGAAACAGTTGAATCCCAGCATGATGGAAGTATAACAGCTTCTTTGACAGAGAGCAAGTCTGCTCAT
GTGCAGACTCAGACTGGGCAAATTTCAATCCCTGCTTTAGCTCAGTGCAGTGAGCTGAGATCAGGCACCAGAAGA
GGCTCCCCAGCTGTAACCTCTAGTGCAATTACCTTCGGGCCAAACTATACATGTCCAGGGAGTAATTCAGACACCA
CAGCCATGGGTATTTCAGTCATCAGAAATACACACCGTTTCAGGTAGCAGCAATTGCAGAGACAGATGAATCTGCA
GAATCAGAAGGTGTAATTGATTCTCATAAACGTAGAGAAATCCTTTACGAAGACCCTCTTATAGGAAAATACTG
AATGAACTGTCCTCTGATGTGCCTGGTGTTCCCAAGATTGAAGAAGAGAGATCAGAGGAAGAAGGAACACCACCT
AGTATTGCTACCATGGCAGTACCAACTAGCATATATCAGACTAGCACGGGGCAATACATTGCTATAGCCCAAGGT
GGAACAATCCAGATTTCTAACCAGGATCTGATGGTGTTTCAGGGACTGCAGGCATTAACAATGACAAATTCAGGA
GCTCCTCCACCAGGTGCTACAATTGTACAGTACGCAGCACAATCAGCTGATGGCACACAGCAGTTCTTTGTCCCA
GGCAGCCAGGTTGTTGTTCAAGCTGCCACTGGTGACATGCCAACTTACCAGATCCGAGCTCCTACTGCTGCTTTG
CCACAGGGAGTGGTGATGGCTGCATCGCCCGGAAGTTTGCACAGTCCCCAGCAGCTGGCAGAAGAAGCAACACGC
AAACGAGAGCTGAGGCTAATGAAAAACAGAGAAGCTGCCCGGGAGTGTCGCAGGAAGAAGAAAGAAATATGTCAA
TGTCTTGAAAATCGTGTGGCTGTGCTTGAAAACCAAAACAAGACTCTCATTGAGGAACTCAAGGCCCTCAAAGAT
CTTTATTGCCATAAAGTAGAGTAACTGTCTTTGACTTGGACCTTGTTTACTCTAATCAAGGCAGGAGATGCAGCA
GTCCTACTTATTGCCATGTGGACTTGTGGGAAGGACACGTGTGACCCTTAAGAATCCAGTTTGGATTAGTGTTTG
AAATTGAATTGGGAATGTTGTTCCAGGATGTGGAATGCAGCGTGATCACACTTACCGAGCTTACTTTGATCTGTT
TGTCAATAGCATGCAAAAAATGCTTTGTTTGCCCTTTGCTTCTGCTTTTTTTTCAGGGAAGCTGCCAAAGAATGTC
GACGTCGAAAGAAAGAATATGTAAAATGCCTGGAGAGCCGAGTTGCAGTGCTGGAAGTCCAGAACAAGAAGCTTA
TAGAGGAACCTTGAAACCTTGAAAGACATTTGTTCTCCAAAACCTGATTACTAGAAATATTTAACTATGAACTGAT
TACAGA

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FIGURE 543

MTMETVESQHDGSITASLTESKSAHVQTQTGQISIPALAQCSSELRSCTRGGSPAVTLVQLPSGQTIHVQGVIQTP
QPWVIQSSEIHTVQVAAIAETDESAESEGVIDSHKRREILSRRPSYRKILNELSSDVPGVPKIEEERSEEEGTPP
SIATMAVPTSIYQTSTGQYIAIAQGGTIQISNPGSDGVQGLQALMTNMSGAPPPGATIVQYAAQSADGTQQFFVP
GSQVVVQAATGDMPTYQIRAPTAALPQGVVMAASPGSLHSPQQLAEEATRKRRLMLMKNREAARECRRKKKEYVK
CLENRVAVLENQNKTLLIEELKALKDLYCHKVE

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FIGURE 544

GAATTCGGCCAAAGAGGCCTATGCTTCTCTGAAGACTTGCAGCAAGGCTTGCTGAGGCTCACAGAAGATAGCCCC
AGTGTTTTGGAGTGGTTTTGAATGTGATTCTGAGATCAGACTGACTGAGCTGGAATCCTGGCTTTATATCTTACC
AGCTACACAACCTTGGAGTCTTAGAAATTTTTCTTTTCAATAAGCAGTCATCCTTACTTTCCCTCAAGATGACA
AACAGTTCGTTCTTCTGCCCAGTTTATAAAGATCTGGAGCCATTACGTAATTTTTTTTTATTTAGTTTTTCCTTGTT
GGAATTATTGGAAGTTGTTTTGCAACCTGGGCTTTTATACAGAAGAATACGAATCACAGGTGTGTGAGCATCTAC
TTAATTAATTTGCTTACAGCCGATTTCTGCTTACTCTGGCATTACCAGTGAAAATTGTTGTTGACTTGGGTGTG
GCACCTTGGAAGCTGAAGATATTCCACTGCCAAGTAACAGCCTGCCTCATCTATATCAATATGTATTTATCAATT
ATCTTCTTAGCATTGTGTCAGCATTGACCGCTGTCTTCAGCTGACACACAGCTGCAAGATCTACCGAATACAAGAA
CCCGGATTTGCCAAAATGATATCAACCGTTGTGTGGCTAATGGTCCTTCTTATAATGGTGCCAAATATGATGATT
CCCATCAAAGACATCAAGGAAAAGTCAAATGTGGGTTGTATGGAGTTTAAAAAGGAATTTGGAAGAAATTGGCAT
TTGCTGACAAAATTCATATGTGTAGCAATATTTTTAAATTTCTCAGCCATCATTTTAATATCCAATTGCCTTGTA
ATTGACAGCTCTACAGAAACAAAGATAATGAAAATTACCCAAATGTGAAAAAGGCTCTCATCAACATACTTTTA
GTGACCACGGGCTACATCATATGCTTTGTTTCCTTACCACATTGTCCGAATCCCGTATACCCTCAGCCAGACAGAA
GTCATAACTGATTGCTCAACCAGGATTTCACTCTTCAAAGCCAAAGAGGCTACACTGCTCCTGGCTGTGTGGAAC
CTGTGCTTTGATCCTATCCTGTACTATCACCTCTCAAAGCATTCCGCTCAAAGGTCAGTACTGAGACTTTTGCCTCA
CCTAAAGAGACCAAGGCTCAGAAAGAAAAATTAAGATGTGAAAATAATGCATATAAGACAGGATTTTTTGTGCTA
CCAATTCTGGCCTTACTGGACCATAAAGTTAATTATAGCTTTGAAAGATAAAAAAAAAAAAAAAAAAGCGGCCGC

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FIGURE 545

MTNSSFFCPVYKDLEPFTYFFYLVLVGIIGSCFATWAFIQKNTNHRCSVSIYLINLLTADFLTLALPVKIVVDL
GVAPWKLKIFHCQVTACLIYINMYLSIIFLAFVSDRCLQLTHSCKIYRIQEPGFAKMISTVVWLMVLLIMVPM
MIPIKDIKEKSNVGCMEFKKEFGRNWHLLTNFICVAIFLNFSAILISNCLVIRQLYRNKDNENYPNVKKALINI
LLVTTGYIICFVPYHIVRIPYTLSQTEVITDCSTRISLFKAKEATLLLA VSNLCFDPILYYHLSKAFRSKVTETF
ASPKETKAQKEKLRCE NNA

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FIGURE 546

GAATTCGGCACGAGTCAGGGAAGCAGCCCCGGCGGCCAGCAGGGAGCTCAGGACAGAGCAGGCTCCCTGGGAAGC
CTCCGGGTGATAGGGGTGTTCCAGCTGCGGCGCTCTGGGGGTTTCAAGGGGGATCTTGAATGAACAAATGAATGA
ACTGCTTTCTGGGCAAACAGCCACAGCCAGAGGAGCCTGTGATTGGCAGAAAGAAGCCAGGGTGTGCAAGTCTCC
CCAACAGCCTCGAGTGGCCTGCAGTCACAGGGAACCTCAGGAAGACCTTCCGGGCAGAGACCAGAGGGAAGCCC
ATCTCTCCAGCAGAACTGCTTGGATTTTTCTACCAGGAGGCTCAGGGCTCTGCAACAATGATAGCAGAAGCTGAT
GGCATCTAGAGATCTAGGCTGGGACTAGCACAGCATCACTTCTACCACTTTCTGTTGGTCACAGCAACTCACCAT
GCCAGTGCAGATTCAAGGGGAGGAGAAATAGAGTCCACTTCTTGATGGGAGGCGTGACATAGAATGGAGGATGAA
GATTACAACACTTCCATCAGTTACGGTGATGAATACCCTGATTATTTAGACTCCATTGTGGTTTTGGAGGACTTA
TCCCCCTTGGAAGCCAGGGTGACCAGGATCTTCCTGGTGGTGGTCTACAGCATCGTCTGCTTCCTCGGGATTCTG
GGCAATGGTCTGGTGATCATATTGCCACCTTCAAGATGAAGAAGACAGTGAACATGGTCTGGTTCCCTCAACCTG
GCAGTGGCAGATTTCTGTTCAACGTCTTCCTCCCAATCCATATCACCTATGCCGCCATGGACTACCACTGGGTT
TTCGGGACAGCCATGTGCAAGATCAGCAACTTCCTTCTCATCCACAACATGTTTACCAGCGTCTTCCTGCTGACC
ATCATCAGCTCTGACCGCTGCATCTCTGTGCTCCTCCCTGTCTGGTCCCAGAACCACCGCAGCGTTTCGCTGGCT
TACATGGCCTGCATGGTCATCTGGGTCTGGCTTTCTTCTTGAGTCCCCATCTCTCGTCTTCCGGGACACAGCC
AACCTGCATGGGAAAATATCCTGCTTCAACAACCTTCAGCCTGTCCACACCTGGGTCTTCCTCGTGGCCCACTCAC
TCCCAAATGGACCCTGTGGGGTATAGCCGGCACATGGTGGTGACTGTCACCCGCTTCCTCTGTGGCTTCCTGGTC
CCAGTCCTCATCATCACAGCTTGCTACCTCACCATCGTGTGCAAACCTGCAGCGCAACCGCCTGGCCAAGACCAAG
AAGCCCTTCAAGATTATTGTGACCATCATCATTACCTTCTTCCTCTGCTGGTGCCCTACCACACACTCAACCTC
CTAGAGCTCCACCACACTGCCATGCCTGGCTCTGTCTTACGCTGGGTTTGCCCTGGCCACTGCCCTTGCCATT
GCCAACAGCTGCATGAACCCCAATTCTGTATGTTTTATGGGTGAGGACTTCAAGAAGTTCAAGGTGGCCCTCTTC
TCTCGCCTGGTCAATGCTCTAAGTGAAGATACAGGCCACTCTTCCTACCCAGCCATAGAAGCTTTACCAAGATG
TCATCAATGAATGAGAGGACTTCTATGAATGAGAGGGAGACCGGCATGCTTTGATCTCTCACTGTGGAACCCCTCA
ATGGACTCTCTCAACCCAGGGACACCCAAGGATATGTCTTCTGAAGATCAAGGCAAGAACCTCTTTAGCATCCAC
CAATTTTCACTGCATTTTGCATGGGATGAACAGTGTTTTATGCTGGGAATCTAGGGCCTGGAACCCCTTTCTTCT
AGTGGACAGAACATGCTGTGTTCCATACAGCCTTGGACTAGCAATTTATGCTTCTTGGGAGGCCAGCCTTGACTG
ACTCAAAGCAAAAAAGGAAGAATTC

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FIGURE 547

MEDEDYNTSISYGDEYPDYLD SIVVLEDLSPLEARVTRIFLVVVYSIVCFLGILGNGLV III IATFKMKKTVMVW
FLNLAVADFLFNVFLPIHITYAAMDYHWVFGTAMCKISNFLLIHNMFTSVFLLTIISSDRCSVLLPVWSQNHRS
VRLAYMACMVIWVLAFFLSSPSLVFRDTANLHGKISCFNNFSLSTPGSSSWPTHSQMDPVGYSRH MVVTVTRFLC
GFLVPVLIITACYLTIVCKLQRNRLAKTKKPFKIIVTIIITFFLCWCPYHTLN LLELHHTAMPGSVFSLGLPLAT
ALAIANS CMNPILYVFMGQDFKKFKVAFSRLVNALSED TGHSSYP SHRSFTKMSSMNERTSMNERETGML

[illegible]

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FIGURE 549

MDFSRNLYDIGEQLDSEDLASLKFLSLDYIPQRKQEP IKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLL
ITYLNTRKEEMERELQTPGRAQISAYRFHF CRMSWAEANSQCQTQSVPFWRRVDHLLIRVMLYQISEEVSRSELR
SFKFLLQEEISKCKLDDDMNLLDIFIEMEKRVLGEGKLDILKRVCAQINKSLLKIINDYEEFSKGEELCGVMTI
SDSPREQDSESQTLDKVYQMKSKPRGYCLII NNHNFAKAREKVPKLHSIRDRNGTHLDAGALTTTFFELHFEIKP
HDDCTVEQIYEILKIYQLMDHSNMDCFI CCILSHGDKGI IYGTDGQEAPIYELTSQFTGLKCPSLAGKPKVFFIQ
ACQGDNYQKGIPVETDSEEQPYLEMDLSSPQTRYIPDEADFLLGMATVNNCVSYRNPAEGTWYIQSLCQSLRERC
PRGDDILTILTEVNYEVSNKDDKKNMGKQMPQPTFTLRKKLVFPSPD

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FIGURE 550

GTTTTTTTCCCTTCTGAGCAATGGAGCTTACCATCTTTATCCTGAGACTGGCCATTTACATCCTGACATTTCCT
TGTACCTGCTGAACCTTCTGGGCTTGTGGAGCTGGATATGCAAAAAATGGTTCCCCTACTTCTTGGTGAGGTTCA
CTGTGATATACAACGAACAGATGGCAAGCAAGAAGCGGGAGCTCTTCAGTAACCTGCAGGAGTTTGCGGGCCCT
CCGGGAAACTCTCCCTGCTGGAAGTGGGCTGTGGCACGGGGGCCAACTTCAAGTTCTACCCACCTGGGTGCAGGG
TGACCTGTATTGACCCCAACCCCAACTTTGAGAAGTTTTTGGATCAAGAGCATTGCAGAGAACCGACACCTGCAGT
TTGAGCGCTTTGTGGTAGCTGCCGGGGAGAACATGCACCAGGTGGCTGATGGCTCTGTGGATGTGGTGGTCTGCA
CCCTGGTGCTGTGCTCTGTGAAGAACCAGGAGCGGATTCTCCGCGAGGTGTGCAGAGTGCTGAGACCGGGAGGGG
CTTCTATTTTCATGGAGCATGTGGCAGCTGAGTGTTTCGACTTGGAATTACTTCTGGCAACAAGTCTGGATCCTG
CCTGGCACCTTCTGTTTGATGGGTGCAACCTGACCAGAGAGAGCTGGAAGGCCCTGGAGCGGGCCAGCTTCTCTA
AGCTGAAGCTGCAGCACATCCAGGCCCACTGTCCTGGGAGTTGGTGCGCCCTCATATCTATGGATATGCTGTGA
AATAGTGTGAGCTGGCAGTTAAGAGCTGAATGGCTCAAAGAATTTAAAGCTTCAGTTTTACATTTAAAATGCTAA
GTGGGAGAAGAGAAACCTTTTTTTTTGGGGGGCGGTTTTTTTTGGTTTGTGTTGGTTTTTTTTTTTTTTTTGGCAA
GACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAGTAGAGACAGGGAGACAGGGTCTCACTGTGTTGCCTAG
GCCGGTCTTGAACCTCTGGGCTCAAGTGATTCTCCACCTTGACCTCCTAAATTGTTGGGATTACAGGTGTGAGA
CAGTGACCTGGCCGAAATAGCTCAAGTTTCTGAAAAACAAATCTGAATCTATTTGTTATTCTTAGCGTCACTGG
TCTGGCTTTCAGAAATTAACATACAAGGTTGCCACACCTAGTTCTGCCAGCTTTATGTCTTTTATTCCAGTATTC
CACCAAAGTTTGTTTTCTGCTTCAGTTCTCAAGTCTTAAGATAAAGATTGTACTTGACAGTTTAGTATATCC
ATAAACTATTTGAGGTGGTTAAGGTTCTTGGGTTCATTTTCTTAATACTTTGCTGAATATTGTAGATTGTAGG
CAATGAAAAAGTCTACTAAATTAGGAAAACCTTGAATAATTAGGTATCCTAGGTAAGAGCCCCTAAACATCAAGC
AATCTGTGAGTCTGTAAAGAAATAAATATTTTTTGGATTATTCTTATCTAATTCCACCCCTGTTGGAAGATGATT
TCTTTGTTCTTTGCAACTATGGAAGCTGTGAAAATCATCACAAGTGCTCTGAAAGCGAGTGTTAGGTTGGTTAG
AGGGTTTAATATTTTCTGCAATGGTTTGTAGGAATTTTAATAAATGTAGTATATTTTCTGAGATGATTTTGTAA
AGTACTATTTTAAATATCAAATCAACCAATAAATTCACATTTGTGTTAGGAACAG

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FIGURE 551

MELTIFILRLAIYILTFPLYLLNFLGLWSWICKKWFPYFLVRETVIYNEQMASKKRELF SNLQEFAGPSGKLSLL
EVGCGTGANFKFYPPGCRVTCIDPNPNFEKFLIKSIAENRHLQFERFVVAAGENMHQVADGSVDVVVCTLVLCSV
KNQERILREVCRLRPGGAFYFMEHVAAECSTWNYFWQQVLDPAWHLLFDGCNLTRESWKALERASF SKLKLQHI
QAPLSWELVRPHIYGAVK

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FIGURE 552

GGGCAACGGAGGGGAAATAAAAGGGAACGGCTCCGAATCTGCCCCAGCGGCCGCTGCGAGACCTCGGCGCCGACA
TCGCGACAGCGAAGCGCTTTGCACGCCAGGAAGGTCCCCTCTATGTGCTGCTGAGCCGGTCCTGGACGCGACGAG
CCCGCCCTCGGTCTTCGGAGCAGAATTCGCAAAAACGGAAGGACTGGAAATGGCAGACCATATGATGGCAATGAA
CCACGGGCGCTTCCCCGACGGCACCAATGGGCTGCACCATCACCTGCCACCGCATGGGCATGGGGCAGTTCCC
GAGCCCCCATCACCAACAGCAGCAGCAGCCCCAGCAGCCTTCAACGCCCTAATGGGCGAGCACATACTACGG
CGCGGGCAACATGAATGCCACGAGCGGCATCAGGCATGCGATGGGGCCGGGGACTGTGAACGGAGGGCACCCCC
GAGCGCGCTGGCCCCCGCGGCCAGGTTTAAACAACTCCCAGTTTATGGGTCCCCCGGTGGCCAGCCAGGGAGGCTC
CCTGCCGGCCAGCATGCAGCTGCAGAAGCTCAACAACCAGTATTTCAACCATCACCCCTACCCCCACAACCACTA
CATGCCGGATTTGCACCCCTGCTGCAGGCCACCAGATGAACGGGACAAACCAGCACTTCCGAGATTGCAACCCCAA
GCACAGCGGCGGCAGCAGCACCCCCGGCGGCTCGGGCGGCAGCAGCACCCCCGGCGGCTCTGGCAGCAGCTCGGG
CGGCGGCGCGGGCAGCAGCAACAGCGGCGGCGGCAGCGGCAGCGGCAACATGCCCGCTCCGTGGCCCACGTCCC
CGCTGCAATGCTGCCGCCCAATGTTCATAGACACTGATTTTCATCGACGAGGAAGTTCTTATGTCTTGGTGATAGA
AATGGGTTTGGACCGCATCAAGGAGCTGCCCGAACCTCTGGCTGGGGCAAAACGAGTTTGATTTTATGACGGACTT
CGTGTGCAAAACAGCAGCCCAGCAGAGTGAGCTGTGACTCGATCGAAACCCCGGCAGAAAGAAATCAAACCCCCAA
CTTCTTCGGCGTGAATTTAAAGAAACATTCCCTTAGACACAGTATCTCACTTTTCAGATCTTGAAAGGTTTGAGA
ACTTGAAACAAAGTAACTATAAATTGTACAAATTGGTTTTTAAAAAAATTGCTGCCACTTTTTTCTGTGTTT
TTGTTTCGTTTTTGTAGCCTTGACATTACCCACCTCCCTTATGTAGTTGAAATATCTAGCTAAGTTGGTCTTTT
TCGTTGTTTGTTTTTACTCCTTTCCCTCACTTTCTCCAGTGCTCAACTGTTAGATATTAATCTTGGCAAACCTGCT
TAATCTTGTTGATTTTGTAGATGGTTTCAAATGACTGAACTGCATTTCAGATTTACGAGTGAAAGGAAAAATTGCA
TTAGTTGGTTGCATGAACTTCGAAGGGCAGATATTACTGCACAACTGCCATCTCGCTTCATTTTTTTAACTATG
CATTTGAGTACAGACTAATTTTTTAAATATGCTAACTGGAAGATTAAACAGATGTGGGCCAACTGTTCTGGAT
CAGGAAAGTCATACTGTTCACTTTCAAGTTGGCTGTCCCCCGCGCCCCCCCCACCCCCATATGTACAGATGA
TAATAGGGTGTGGAATGTCGTCAGTGGCAAACATTTACAGATTTTATTTTGTCTGTCTTCAACATTTTTGA
CACTGTGCTAATAGTTATATTAGTACATGAAAAGATACTACTGTGTTGAAAGCTTTTTAGGAAATTTGACAGT
ATTTTTGTACAAAACATTTTTTTGAAAAATACTTGTTAATTTATCTATTTTAATTGCCAATGTCAATAAAAA
GTTAAGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 553

MADHMMAMNHGRFPDGTNGLHHHPAHRMGMGQFSPPHHHQQQQPQHAFNALMGEHIHYGAGNMNATSGIRHAMGP
GTVNGGHPPSALAPAARFNNSQFMGPPVASQGGSLPASMQLQKLNNQYFNHHPYPHNHYPDLHPAAGHQMNGTN
QHFRDCNPKHSGGSSTPGGSGGSSTPGGSGSSSGGAGSSNSGGGSGSGNMPASVAHVPAAMLPPNVIDTDFIDE
EVLMSLVIEMGLDRIKELPELWLQGNEFDFTDFVCKQQPSRVSC

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FIGURE 554

ACACGGACCAAGGAGTCTAACACGTGCGCGAGTCGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAGGTGAA
GGCCGGCGCGCTCGCCGGCCGAGGTGGGATCCCCGAGGCCCTCCAGTCCGCCGAGGGCGCACACCACGGCCCGTCT
CGCCCGCCGCGCCGGGGAGGTGGAGCACGAGCGCACGTGTTAGGACCCGAAAGATGGTGAACCTATGCCTGGGCAG
GGCGAAGCCAGAGGAAACTCTGGTGGAGGTCCGTAGCGGTCTTGACGTGCAAATCGGTTCGTCCGACCTGGGTATA
GGGGCGGGCTCCAGGCGAGGCGGTTCGACGCTCCTGAAAACTTGCGCGCGCGCTCGCGCCACTGCGCCCCGAGCGA
TGAAGATGGTCGCGCCCTGGACGCGGTTCTACTCCAACAGCTGCTGCTTGTGCTGCCATGTCCGCACCGGCACCA
TCCTGCTCGGCGTCTGGTATCTGATCATCAATGCTGTGGTACTGTTGATTTTATTGAGTGCCCTGGCTGATCCGG
ATCAGTATAACTTTTTCAAGTTCTGAACCTGGGAGGTGACTTTGAGTTCATGGATGATGCCAACATGTGCATTGCCA
TTGCGATTTCTCTTCTCATGATCCTGATATGTGCTATGGCTACTTACGGAGCGTACAAGCAACGCGCAGCCTGGA
TCATCCCATTCTTCTGTTACCAGATCTTTGACTTTGCCCTGAACATGTTGGTTGCAATCACTGTGCTTATTTATC
CAAACCTCCATTACAGGAATACATACGGCAACTGCCTCCTAATTTTCCCTACAGAGATGATGTGATGTGCTGAAATC
CTACCTGTTTGGTCCTTATTATTCTTCTGTTTATTAGCATTATCTTGACTTTTAAGGGTTACTTGATTAGCTGTG
TTTGGAACCTGCTACCGATACATCAATGGTAGGAACTCCTCTGATGTCCTGGTTTATGTTACCAGCAATGACACTA
CGGTGCTGCTACCCCCGATGATGATGCCACTGTGAATGGTGTGCTGCCAAGGAGCCACCGCCACCTTACGTGTCTG
CCTAAAGCCTTCAAGTGGGCGGAGCTGAGGGCAGCAGCTTGACTTTGCAGACATCTGAGCAATAGTTCTGTTATTT
CACTTTTGCCATGAGCCTCTCTGAGCTTGTTTGTGCTGAAATGCTACTTTTTAAAATTTAGATGTTAGATTGAA
AACTGTAGTTTTCAACATATGCTTTGCTAGAACACTGTGATAGATTAAGTGTAGAATTTCTTCTGTACGATTGGG
GATATAATGGGCTTCACTAACCTTCCCTAGGCATTGAAACTTCCCCCAAATCTGATGGACCTAGAAGTCTGCTTT
TGTACCTGCTGGGCCCCAAAGTTGGGCATTTTTCTCTCTGTTCCCTCTCTTTTGAATATGTAAAATAAAACCAAA
AATAGACAACTTTTCTTCCAGCCATTCCAGCATAGAGAACAAAACCTTATGGAAACAGGAATGTCAATTGTGTAA
TCATTGTTCTAATTAGGTAAATAGAAGTCCTTATGTATGTGTTACAAGAATTTCCCCCACAACATCCTTTATGAC
TGAAGTTCAATGACAGTTTGTGTTTGGGTGGTAAAGGATTTTCTCCATGGCCTGAATTAAGACCATTAGAAAGCA
CCAGGCCGTGGGAGCAGTGACCATCTGCTGACTGTTCTTGTGGATCTTGTGTCCAGGGACATGGGGTGACATGCC
TCGTATGTGTTAGAGGGTGGAATGGATGTGTTTGGCGCTGCATGGGATCTGGTGCCCTCTTCTCCTGGATTAC
ATCCCCACCCAGGGCCCGCTTTTACTAAGTGTCTGCCCCTAGATTGGTTCAAGGAGGTCATCCAACCTGACTTTAT
CAAGTGGAAATTGGGATATATTTGATATACTTCTGCCTAACAAACATGGAAAAGGGTTTTCTTTTCCCTGCAAGCTA
CATCCTACTGCTTTGAACTTCCAAGTATGTCTAGTCACCTTTTAAAATGTAAACATTTTACAGAAAATGAGGATT
GCCTTCCTTGTATGCGCTTTTTACCTTGACTACCTGAATGCAAGGGATTTTTATATATTCATATGTTACAAAGT
CAGCAACTCTCCTGTTGGTTCATTATTGAATGTGCTGTAAATTAAGTTGTTTGCAATTAACAAGGTTTGCCCA
CAAAAAAAAAA

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FIGURE 555

MVNYAWAGRSQRKLWWRSVAVLTCKSVVRPGYRGGLQARRSTLLKTCARARATAPGAMKMVAPWTRFYNSCCLC
CHVRTGTILLGVWYLIINAVVLLILLSALADPDQYNFSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGA
YKQRAAWIIPFFCYQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLIILLFISIIILTF
KGYLISCVWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPPPYVSA

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FIGURE 556

GGACAACCGGCTGGGGTCCTTGCGCGCCGCGGCTCAGGGAGGAGCACCGACTGCGCCGCACCCCTGAGAGATGGTT
GGTGCCATGTGGAAGGTGATTGTTTCGCTGGTCCTGTTGATGCCTGGCCCCCTGTGATGGGCTGTTTCGCTCCCTA
TACAGAAGTGTTCATGCCACCTAAGGGAGACTCAGGACAGCCATTATTTCTCACCCCTTACATTGAAGCTGGG
AAGATCCAAAAGGAAGAGAATTGAGTTTGGTCGGCCCTTTCCAGGACTGAACATGAAGAGTTATGCCGGCTTC
CTCACCGTGAATAAGACTTACAACAGCAACCTCTTCTCTGGTTCTTCCCAGCTCAGATACAGCCAGAAGATGCC
CCAGTAGTTCTCTGGCTACAGGGTGGGCCGGGAGGTTTCATCCATGTTTGGACTCTTTGTGGAACATGGGCCTTAT
GTTGTCACAAGTAACATGACCTTGCGTGACAGAGACTTCCCCTGGACCACAACGCTCTCCATGCTTTACATTGAC
AATCCAGTGGGCACAGGCTTCAGTTTTACTGATGATACCCACGGATATGCAGTCAATGAGGACGATGTAGCACGG
GATTTATACAGTGCCTAATTCAGTTTTTCCAGATATTTCTGAATATAAAAAATAATGACTTTTATGTCACCTGGG
GAGTCTTATGCAGGGAAATATGTGCCAGCCATTGCACACCTCATCCATTCCCTCAACCCCTGTGAGAGAGGTGAAG
ATCAACCTGAACGGAATTGCTATTGGAGATGGATATTCTGATCCCGAATCAATTATAGGGGGCTATGCAGAATTC
CTGTACCAAATTGGCTTGTTGGATGAGAAGCAAAAAAAGTACTTCCAGAAGCAGTGCCATGAATGCATAGAACAC
ATCAGGAAGCAGAACTGGTTTGAGGCCTTTGAAATACTGGATAAACTACTAGATGGCGACTTAACAAGTGATCCT
TCTTACTTCCAGAATGTTACAGGATGTAGTAATTACTATAACTTTTTGCGGTGCACGGAACCTGAGGATCAGCTT
TACTATGTGAAATTTTTGTCACTCCCAGAGGTGAGACAAGCCATCCACGTGGGGAATCAGACTTTTAATGATGGA
ACTATAGTTGAAAAGTACTTGCGAGAAGATACAGTACAGTCAGTTAAGCCATGGTTAACTGAAATCATGAATAAT
TATAAGGTTCTGATCTACAATGGCCAACCTGGACATCATCGTGGCAGCTGCCCTGACAGAGCGCTCCTTGATGGGC
ATGGACTGGAAAGGATCCAGGAATACAAGAAGGCAGAAAAAAAGTTTGGAAGATCTTTAAATCTGACAGTGAA
GTGGCTGGTTACATCCGGCAAGTGGGTGACTTCCATCAGGTAATTATTTCGAGGTGGAGGACATATTTTACCCTAT
GACCAGCCTCTGAGAGCTTTTGACATGATTAATCGATTCAATTTATGGAAGGATGGGATCCTTATGTTGGATTAA

ACTACCTTCCCAAAAGAGAACATCAGAGGTTTTTCATTGCTGAAAAGAAAATCGTAAAAACAGAAAATGTCATAGG
AATAAAAAAATTATCTTTTCATATCTGCAAGATTTTTTTCATCAATAAAAAATTATCCTTGAAA

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FIGURE 557

MVGAMWKVIVSLVLLMPGPCDGLFRSLYRSVSMPPKGDGQPLFLTPYIEAGKIQGRELSLVGPFPGGLNMKSYA
GFLTIVNKTYNSNLFFWFFPAQIQPEDAPVVLWLQGGPGGSSMFGLFVEHGPYVVTSNMTLRDRDFPWTTLTSMY
IDNPVGTGFSFTDDTHGYAVNEDDVARDLYSALIQFFQIFPEYKNNDFYVTGESYAGKYVPAIAHLIHSNLPVRE
VKINLNGIAIGDGYSDPESIIGGYAEFLYQIGLLDEKQKKYFQKQCHECIEHIRKQNWFEAFEILDKLLDGDLS
DPSYFQNVTGCSNYNFLRCTEPEDQLYYVKFLSLPEVRQAIHVGNQTFNDGTIVEKYLREDTVQSVKPLTEIM
NNYKVLIIYNGQLDIIVAAALTERSLMGMDWKGSQEYKKAEEKVWKIFKSDSEVAGYIRQVGDFHQVIIRGGGHIL
PYDQPLRAFDMINRFIYGKGWDPYVG

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FIGURE 558

CTACCTCTTCCTCTCCACGCGGTTGAGAAGACCGGTCGGCCTGGGCAACCTGCGCTGAAGATGCCGGGAAAACTC
CGTAGTGACGCTGGTTTGGAAATCAGACACCGCAATGAAAAAAGGGGAGACACTGCGAAAGCAAACCGAGGAGAAA
GAGAAAAAAGAGAAGCCAAAATCTGATAAGACTGAAGAGATAGCAGAAGAGGAAGAACTGTTTTCCCAAAGC
TAAACAAGTTAAAAAGAAAGCAGAGCCTTCTGAAGTTGACATGAATTCTCCTAAATCCAAAAAGGCAAAAAAGAA
AGAGGAGCCATCTCAAAATGACATTTCTCCTAAAAACCAAAAGTTTGAGAAAGAAAAAGGAGCCCATTGAAAAGAA
AGTGGTTTTCTTCTAAAAACCAAAAAAGTGACAAAAAATGAGGAGCCTTCTGAGGAAGAAATAGATGCTCCTAAGCC
CAAGAAGATGAAGAAAGAAAAGGAAATGAATGGAGAACTAGAGAGAAAAGCCCCAACTGAAGAATGGATTTC
TCATCCTGAACCGGACTGTAACCCCAGTGAAGCTGCCAGTGAAGAAAGTAACAGTGAGATAGAGCAGGAAATACC
TGTGGAACAAAAAGAAGGCGCTTTCTCTAATTTTCCCATATCTGAAGAACTATTAAACTTCTCAAAGGCCGAGG
AGTGACCTTCCTATTTCTATACAAGCAAAGACATTCCATCATGTTTACAGCGGGAAGGACTTAATTGCACAGGC
ACGGACAGGAAGTGGGAAGACATTCTCCTTTGCCATCCCTTTGATTGAGAACTTCATGGGGAAGTCAAGACAG
GAAGAGAGGCCGTGCCCTCAGGTACTGGTCTTGACCTACAAGAGAGTTGGCAAATCAAGTAAGCAAAGACTT
CAGTGACATCACAAAAAGCTGTCAGTGGCTTGTTTTTATGGTGGAACTCCCTATGGAGGTCAATTTGAACGCAT
GAGGAATGGGATTGATATCCTGGTTGGAACACCAGGTCGTATCAAAGACCACATACAGAATGGCAAAGTAGATCT
CACCAAATTAAGCATGTTGTCTGGATGAAGTGGACCAGATGTTGGATATGGGATTTGCTGATCAAGTGGGAAGA
GATTTTAAGTGTGGCATAACAAGAAAGATTCTGAAGACAATCCCCAAACATTGCTTTTTTCTGCAACTTGCCCTCA
TTGGGTATTTAATGTTGCCAAGAAATACATGAAATCTACATATGAACAGGTGGACCTGATTGGTAAAAAGACTCA
GAAAACGGCAATAACTGTGGAGCATCTGGCTATTAAGTGCCACTGGACTCAGAGGGCAGCAGTTATTGGGGATGT
CATCCGAGTATATAGTGGTCATCAAGGACGCACTATCATCTTTTGTGAACCAAGAAAGAGCCAGGAGCTGTC
CCAGAATTCAGCTATAAAGCAGGATGCTCAGTCCTTGATGGAGACATTCCACAGAAGCAAAGGGAAATCACCCCT
GAAAGGTTTTAGAAATGGTAGTTTTTGGAGTTTTTGGTGGCAACCAATGTTGCTGCACGTGGGTTAGACATCCCTGA
GGTTGATTGGTTATACAAAGCTCTCCACCAAGGATGTAGAGTCCTACATTCATCGATCCGGGCGGACAGGCAG
AGCTGGAAGGACGGGGGTGTGCATCTGCTTTTATCAGCACAAGGAAGAATATCAGTTAGTACAAGTGGAGCAAAA
AGCGGGAATTAAGTTCAAACGAATAGGTGTTCTTCTGCAACAGAAATAATAAAAGCTTCCAGCAAAGATGCCAT
CAGGCTTTTGGATTCCGTGCCTCCCACTGCCATTAGTCACTTCAAACAATCAGCTGAGAAGCTGATAGAGGAGAA
GGGAGCTGTGGAAGCTCTGGCAGCAGCACTGGCCCATATTTAGGTGCCACGTCCGTAGACCAGCGCTCCTTGAT
CAACTCAAATGTGGGTTTTTGTGACCATGATCTTGACGTGCTCAATTGAAATGCCAAATATTAGTTATGCTTGGA
AGAAGTTAAAGAGCAGCTGGGCGAGGAGATTGATTCCAAAGTGAAGGGAATGGTTTTTCTCAAAGGAAAGCTGGG
TGTTTTGCTTTGATGTACCTACCGCATCAGTAACAGAAATACAGGAGAAATGGCATGATTACAGACGCTGGCAGCT
CTCTGTGGCCACAGAGCAACCAGAAGTGAAGGACCGGGAAGGATATGGAGGCTTCAGGGGACAGCGGGAAGG
CAGTCGAGGCTTCAGGGGACAGCGGGACGGAAACAGAAGATTAGAGGACAGCGGGAAGGCAGTAGAGGCCCGAG
AGGACAGCGATCAGGAGGTGGCAACAAAAGTAACAGATCCCAAAACAAAGGCCAGAAGCGGAGTTTCAGTAAAGC
ATTTGGTCAATAAATTAGAAATAGAAGATTTATATAGCAAAAAGAGAATGATGTTTGGCAATATAGAACTGAACAT
TATTTTTCATGCAAAGTTAAAAGCACATTGTGCCTCCTTTTGACCACTTGCCAAGTCCCTGTCTCTTCAGACAC
AGACAAGCTTCATTTAAATTATTTATCTGATCATTATCATTTATAACTTTATTGTTACTTCATCAGTTTTTCT
TTTGAAAGGTGATGAATTCATTACATTTTATTCTAATGTATTATCTGTAGATTAGAAGATAAAATCAAGCATG
TATCTGCCATATACTTTGTGAGTTACCTGTCTTTATACTCAAAAGTGTCCCTTAATAGTGTCTTCCCTGAAATA
AATACCTAAGGGAGTGTAACAGTCTCTGGAGGACCACTTTGAGCCTTTGGAAGTTAAGGTTTTCTCAGCCACCTG
CCGAACAGTTTCTCATGTGGTCTATTATTTGTCTACTGAGACTTAATACTGAGCAATGTTTTGAAACAAGATTT
CAAATAATCTGGGTTGTAATACAGTTTATACCAGTGATGCTCTAGACTTGGAAGATGTAGTATGTTTGATGTG
GATTACCTATACTTATGTTTCGTTTTGATACATTTTTAGCTTCTCATTATAAGGTGATTGCTTTAGTGAATTC
TTCATAGATAGTATATATAAAAGTACATTTTAAATAGAAAAGCCAGGGTTTTAAGGAATTTACATGTATAAGGTGG
CTCCATAGCTTTATTTGTAAGTAGGCTGGATAAATGGTGCTTAAATGGTAATGTACTCCACTTCTTCTATTGGA
AGATTAACATTATTTACCAAGAAGGACTTAAGGGAGTAAGGGGCGCAGATTAGCATTGCTCAAGAGTATGTAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 559

MNSPKSKKAKKKKEEPSQNDISPKTSLRKKKEPIEKKVVSSTKKVTKNEEPSEEEIDAPKPKMKKKEKEMNGET
REKSPKLKNGFPHPEPDCNPSEAASEESNSEIEQEIPVEQKEGAFSNFPISEETIKLLKGRGVTFLLFPIQAKTFH
HVYSGKDLIAQARTGTGKTFSFAIPLIEKLHGELQDRKRGRAPQVLVLAPTRELANQVSKDFSDITKKLSVACFY
GGTPYGGQFERMRNGIDILVGTPGRIKDHIQNGKLDLTKLKHVVLDQMLDMGFADQVEEILSVAYKKDSEDN
PQTLLFSATCPHWVFNVAKKYMKSTYEQVDLIGKKTQKTAITVEHLAIKCHWTQRAAVIGDVIRVYSGHQGRITII
FCETKKEAQELSONSAIKQDAQSLHGDIPQKQREITLKGFRNGSFGVLVATNVAARGLDIPVDLVIQSSPPKDV
ESYIHRSGRTGRAGRTGVCICFYQHKEEYQLVQVEQKAGIKFKRIGVPSATEI IKASSKDAIRLLDSVPPTAISH
FKQSAEKLIEEKGAVEALAAALAHISGATSVDQRSLSNSNVGFVTMILQCSIEMPNISYAWKELKEQLGEEIDSK
VKGMVFLKGKLGVCFDVPTASVTEIQEKWHSRRWQLSVATEQPELEGPREGYGGFRGQREGSRGFRGQRDGNRR
FRGQREGSRGPRGQRSGGKNKSNRSQNGKQKRSFSKAFGQ

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FIGURE 560

CGATTTCATTCCCTCGCTCCCCACAGGTCCCTCTCCCCAAAATATTCCCATCTTGTCTAGCCCATCCCCCAGACT
ATCTCAAGGACCAGCTGTCCCCACGCCCCGACCTCCACTAGGCCTGTGCCACCCGCTGCCTGCAGGAAGACGCC
CGGTCCCGGGCCGGGTTAGCCCC**ATGGGA**ACGCAGCGCCTGTGTGGCCGCGGGACTCAAGGCTGGCCTGGCTCAA
GTGAACAGCACGTCCAGGAGGCGACCTCGTCCGCGGGTTTGCACTCTGGGGTGGACGAGCTGGGGGTTCCGGTCCG
AGCCCGGTGGGAGGCTCCCGAGCGCAGCCTGGGCCCAGCCCACCCCGCGCCGGCGGCCATGGCAGGCACCCCTGG
ACCTGGACAAGGGCTGCACGGTGGAGGAGCTGTCTCCGCGGGTGCATCGAAGCCTTCGATGACTCCGGGAAGGTGC
GGGACCCGCAGCTGGTGCGCATGTTCTCATGATGCACCCCTGGTACATCCCCCTCTCTCAGCTGGCGGCCAAGC
TGCTCCACATCTACCAACAATCCCGGAAGGACAACCTCCAATTCCCTGCAGGTGAAAACGTGCCACCTGGTCAGGT
ACTGGATCTCCGCCTTCCCAGCGGAGTTTGACTTGAACCCGGAGTTGGCTGAGCAGATCAAGGAGCTGAAGGCTC
TGCTAGACCAAGAAGGGAACCGACGGCACAGCAGCCTAATCGACATAGACAGCGTCCCTACCTACAAGTGGAAGC
GGCAGGTGACTCAGCGGAACCCCTGTGGGACAGAAAAAGCGCAAGATGTCCCTGTTGTTTGACCACCTGGAGCCCA
TGGAGCTGGCGGAGCATCTCACCTACTTGGAGTATCGCTCCTTCTGCAAGATCCTGTTTTCAGGACTATCACAGTT
TCGTGACTCATGGCTGCACTGTGGACAACCCCGTCTGGAGCGGTTTCATCTCCCTCTTCAACAGCGTCTCACAGT
GGGTGCAGCTCATGATCCTCAGCAAACCCACAGCCCCGACGCGGGCCCTGGTCATCACACACTTTGTCCACGTGG
CGGAGAAGCTGCTACAGCTGCAGAACTTCAACACGCTGATGGCAGTGGTCGGGGGCCTGAGCCACAGCTCCATCT
CCCGCTCAAGGAGACCCACAGCCACGTTAGCCCTGAGACCATCAAGCTCTGGGAGGGTCTCACGGAAGTAGTGA
CGGCGACAGGCAACTATGGCAACTACCGGCGTGGCTGGCAGCCTGTGTGGGCTTCCGCTTCCCGATCCTGGGTG
TGCACCTCAAGGACCTGGTGGCCCTGCAGCTGGCACTGCCTGACTGGCTGGACCCAGCCCGGACCCGGCTCAACG
GGGCCAAGATGAAGCAGCTCTTTAGCATCCTGGAGGAGCTGGCCATGGTGACCAGCCTGCGGCCACCAGTACAGG
CCAACCCCGACCTGCTGAGCCTGCTCACGGTGTCTCTGGATCAGTATCAGACGGAGGATGAGCTGTACCAGCTGT
CCCTGCAGCGGGAGCCGCGCTCCAAGTCTCGCCAACCAGCCCCACGAGTTGCACCCACCACCCCGGCCCCCGG
TACTGGAGGAGTGGACCTCGGCTGCCAAACCCAAGCTGGATCAGGCCCTCGTGGTGGAGCACATCGAGAAGATGG
TGGAGTCTGTGTTCCGGAACTTTGACGTCGATGGGGATGGCCACATCTCACAGGAAGAATTCCAGATCATCCGTG
GGAACCTTCCCTTACCTCAGCGCCTTTGGGGACCTCGACCAGAACCAGGATGGCTGCATCAGCAGGGAGGAGATGG
TTTCTATTTCTGCGCTCCAGCTCTGTGTTGGGGGGGCGCATGGGCTTCGTACACAACCTTCAGGAGAGCAACT
CCTTGCGCCCCGTCGCTGCCGCCACTGCAAAGCCCTGATCCTGGGCATCTACAAGCAGGGCCTCAAATGCCGAG
CCTGTGGAGTGAACTGCCACAAGCAGTGCAAGGATCGCCTGTGAGTTGAGTGTGCGGCGCAGGGCCAGAGTGTGA
GCCTGGAGGGGTCTGCACCCCTACCCCTACCCATGCACAGCCACCATCACCGCGCCTTCAGCTTCTCTCTGCCCC
GCCCTGGCAGGCGAGGCTCCAGGCCTCCAGAGATCCGTGAGGAGGAGGTACAGACGGTGGAGGATGGGGTGTGTTG
ACATCCACTTG**TAA**TAGATGCTGTGGTTGGATCAAGGACTCATTCTGCCTTGGAGAAAATACTTCAACCAGAGC
AGGGAGCCTGGGGGTGTGCGGGCAGGAGGCTGGGGATGGGGGTGGGATATGAGGGTGGCATGCAGCTGAGGGCAG
GGCCAGGGCTGGTGTCCCTAAGGTTGTACAGACTCTTGTGAATATTTGTATTTTCCAGATGGAATAAAAAGGCC
GTGTAATTAACCTTCA

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FIGURE 561

MGTQRLCGRGTQGWPGSSEQHVQEATSSAGLHSGVDELGVRSEPGGRLPERSLGPAPAPAAAMAGTLDLDKGCTV
EELLRGCI EAFDDSGKVRDPQLVRMFLMMHPWYIPSSQLAAKLLHIYQQSRKDNSNSLQVKTCHLVRYWISAFPA
EFDLNP ELAEQIKELKALLDQEGNRRHSSLIDIDSVP TYKWK RQVTQRNPVGQKKRKM SLLFDHLEPMELAEHLT
YLEYRSFCKILFQDYHSFVTHGCTVDNPVLERFISLFNSVSQWVQLMILSKPTAPQRALVITHFVHVAEKLQLQ
NFNTLMAVVGGLSHSSISRLKETHSHVSPETIKLWEGLTELV TATGNYGNYRRRLAACVGFRFPILGVHLKDLVA
LQLALPDWLDPARTRLNGAKMKQLFSILEELAMVTSLRPPVQANPDLLSLLTVSLDQYQTEDELYQLSLQREPRS
KSSPTSPTSCTPPPRPPVLEEWTSAAKPKLDQALVVEHIEKMVESVFRNFDVDGDGHISQEEFQIIRGNFPYLSA
FGDLDQNQDGCISREEMVSYFLRSSSVLGGRMGFVHNFQESNSLRPVACRHCKALILGIYKQGLKCRACGVNCHK
QCKDRLSVECRRAQSVSLEGSAPSPSPMHSHHHRAFSFSLPRPGRRGSRPPEIREEEVQTVEDGVFDIHL

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FIGURE 562

GCCTGTCCTGACACAATGTGGCTGGGTCCAGACATGAAGAGGTGCTACCGAGCACCTCAATCTACCTCAACTACG
ACGTTAGCTTCTACCATGACGAGGACAGTACCTGCCACCACAAGAGCCCCGGGACCACCGTCCACAGATCCACC
TACCAGAACCACAGCACAGAGACACCAAGCCTGACAGCTGCAGTCCCAAGCTCAGTTAGTGTCCCCAGGGCTCCC
AGCATCAGCCCGTCTACCCTAAGCCCTGCAACCAGCAACCACTCCCAGCACTATGCAAATGAAGACAGTAAGATG
GGCTCAACAGTCACTGCCGCTGTTATCGGGATCATCGTGCCCATAGTGGTGATAGCCCTCCTGTGCATGAGTGGA
TACCTGATCTGGAGAACTGGAAGCGGAAGAACACCAAAAGCATGAATTTTGACAACCCAGTCTACAGGAAAACA
ACAGAAGAAGAAGACGAAGATGAGCTCCATATAGGGGAGAACTGCTCAGATTGGCCATGTCTATCCTGCAGCAATC
AGCAGCTTTGATCGCCCACTGTGGGCAGAGCCCTGTCTTGCGGAGACCAGAGAACCAGGAAGACCCAGCCCCCTGCC
CTCAAGGAGCTTTTTGTCTTGCCGGGGGAACCAAGGTCACAGCTGCACCAACTCCCGAAGAACCCTCTTTCCGAG
CTGCCTGTCTCAAATCCAAGCGAGTGGCATTAAAGCCTTGAAGATGATGGACTACCCTGAGGATGGGATCACCCC
CTTCGTGCCTCATGGAATTCAGTCCCATGCACTACACTCTGGATGGTGTATGACTGGATGAATGGGTTTCTATAT
ATGGGTCTGTGTGAGTGTATGTGTGTGTGATTTTTTTTTTAAATTTATGTTGCGGAAAGGTAACCACAAAGTT
ATGATGAAGTCAAACATCCAAGGATGTGAGAGTTTTTCTATGTATAATGTTTTATACACTTTTTAACTGGTTG
CACTACCCATGAGGAATTCGTGGAATGGCTACTGCTGACTAACATGATGCACATAACCAAATGGGGGCCAATGGC
ACAGTACCTTACTCATCATTTAAAAACTATATTTACAGAAGATGTTTGGTTGCTGGGGGGGCTTTTTTTAGGTTT
TGGGGCATTGTTTTTTGTAAATAAGATGATTATGCTTTGTGGCTATCCATCAACATAAGTAAAAAAAAAAAAAA
AACACTTCAACTCCCTCCCCATTTAGATTATTTATTAACATATTTTAAAAATCAGATGAGTTCTATAAATAATT
TAGAGAAGTGAGAGTATTTATTTTTGGCATGTTTGGCCCACCACACAGACTCTGTGTGTGTATGTGTGTGTTTAT
ATGTGTATGTGTGTGACAGAAAAATCTGTAGAGAAGAGGCACATCTATGGCTACTGTTCAAATACATAAAGATAA
ATTTATTTTCACACAGTCCACAAGGGGTATATCTTGTAGTTTTTCAGAAAAGCCTTTGGAAATCTGGATCAGAAAA
TAGATACCATGGTTTGTGCAATTATGTAGTAAAAAAGGCAAAATCTTTTCACCTCTGGCTATTCTTGAGACCCAG
GAAGTCAGGAAAAGCCTTTTCAGCTACCCATGGCTGCTGTGACTCCTACCAGGGCTTTCTTGGCTTTGGCGAAGG
TCAGTGTACAGACATTCCATGGTACCAGAGTGCTCAGAACTCAAGATAGGATATGCCTCACCTCAGCTACTCC
TTGTTTTAAAGTTCAGCTCTTTGAGTAACTTCTTCAATTTCTTTTCAGGACACTTGGGTTGAATTCAGTAAGTTTC
CTCTGAAGCACCCCTGAAGGGTGCCATCCTTACAGAGCTAAGTGGAGACGTTTCCAGATCAGCCCAAGTTTACTAT
AGAGACTGGCCCAGGCACTGAATGTCTAGGACATGCTGTGGATGAAGATAAAGATGGTGGAATAGGTTTTATCAC
ATCTCTTATTTCTCTTTTCCCCTTACTCTCTACCATTTCCCTTTATGTGGGGAAACATTTTAAGGTAATAAATAGG
TTACTTACCATCATATGTTTCATATAGATGAACTAATTTTTGGCTTAAGTCAGAACAACCTGGCCAAAATTGAAGT
CATATTTGAGGGGGGAAATGGCATACGCAATATTATATTATTTGGATATTTATGTTTCACACAGGAATTTGGTTT
ACTGCTTTGTAAATAAAAGGAAAACTCCGGGTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 563

GGGAGGACCCCAATCTAGGCCCAAGAGGGAAAGGCCACGTGCCTGTATGAGCGTATGAGCATGTGCATGCGCGTG
TGTGCACAGGGTGGTGCACCTGGCAGGGGTCTTGTAGTGAGGCATGCCCCATTCTGTAGCAGGGAACCTGGAATG

GGCTGTGTGTTCTGCAAGAAATTGGAGCCGGTGGCCACGGCCAAGGAGGATGCTGGCCTGGAAGGGGACTTCAGA
AGCTACGGGGCAGCAGACCACTATGGGCCTGACCCCACTAAGGCCCGGCCCTGCATCCTCATTTGCCACATCCCC
AACTACAGCAACTTCTCCTCTCAGGCCATCAACCCTGGCTTCCTTGATAGTGGCACCATCAGGGGTGTGTCAGGG
ATTGGGGTGACCCTGTTTCATTGCCCTGTATGACTATGAGGCTCGAACTGAGGATGACCTCACCTTCACCAAGGGC
GAGAAGTTCCACATCCTGAACAATACTGAAGGTGACTGGTGGGAGGCTCGGTCTCTCAGCTCCGGAAAACTGGC
TGCAATCCCAGCAACTACGTGGCCCCCTGTTGACTCAATCCAAGCTGAAGAGTGGTACTTTGGAAAGATTGGGAGA
AAGGATGCAGAGAGGCAGCTGCTTTACCAGGCAACCCCCAGGGGGCCTTTCTCATTGGGAAAGCGAGACCACC
AAAGGTGCCTACTCCCTGTCCATCCGGGACTGGGATCAGACCAGAGGCGATCATGTGAAGCATTACAAGATCCGC
AACTGGACATGGGCGGCTACTACATCACACACGGGTTCAAGTCAACTCGGTGCAGGAGCTGGTGCAGCACTAC
ATGGAGGTGAATGACGGGCTGTGCAACCTGCTCATCGCGCCCTGCACCATCATGAAGCCGCAGACGCTGGGCCTG
GCCAAGGACGCCCTGGGAGATCAGCCGCAGCTCCATCACGCTGGAGCGCCGGCTGGGCACCGGCTGCTTCGGGGAT
GTGTGGCTGGGCACGTGGAACGGCAGCACTAAGGTGGCGGTGAAGACGCTGAAGCCGGGCACCATGTCCCCGAAG
GCCTTCCTGGAGGAGGCGCAGGTCATGAAGCTGCTGCGGCACGACAAGCTGGTGCAGCTGTACGCCGTGGTGTGCG
GAGGAGCCCATCTACATCGTGACCGAGTTTCATGTGTACGGCAGCTTGCTGGATTTTCTCAAGAACCCAGAGGGC
CAGGATTTGAGGCTGCCCCAATTGGTGGACATGGCAGCCAGGTAGCTGAGGGCATGGCCTACATGGAACGCATG
AACTACATTACCGCGACCTGAGGGCAGCCAACATCCTGGTTGGGGAGCGGCTGGCGTGCAAGATCGCAGACTTT
GGCTTGGCGCGTCTCATCAAGGACGATGAGTACAACCCCTGCCAAGGTTCCAAGTTCCCCATCAAGTGGACAGCC
CCAGAAGCTGCCCTCTTTGGCAGATTACCATCAAGTCAGACGTGTGGTCTTTGGGATCCTGCTCACTGAGCTC
ATCACCAAGGGCCGAATCCCCTACCCAGGCATGAATAAACGGGAAGTGTGGAACAGGTGGAGCAGGGCTACCAC
ATGCCGTGCCCTCCAGGCTGCCAGCATCCCTGTACGAGGCCATGGAACAGACCTGGCGTCTGGACCCGGAGGAG
AGGCCTACCTTCGAGTACCTGCAGTCCTTCTGGAGGACTACTTCACCTCCGCTGAACCACAGTACCAGCCCGGG
GATCAGACATAGCCTGTCCGGGCATCAACCCTCTCTGGCGGTGGCCACCAGTCCTTGCCAATCCCAGAGCTGTT
CTTCCAAAAGCCCCCAGGCTGGCTTAGAACCCCATAGAGTCTAGCATCACCGAGGACGTGGCTGCTCTGACACCA
CCTAGGGCAACCTACTTGTGTTTACAGATGGGGCAAAAGGAGGCCAGAGCTGATCTCTCATCCGCTCTGGCCCCA
AGCACTATTTCTTCCTTTTCCACTTAGGCCCCTACATGCCTGTAGCCCTTTCTCACTCCATCCCCACCCAAAAGT
GCTCAGACCTTGTCTAGTTATTTATAAACTGTATGTACCTCCCTCACTTCTCTCCTATCACTGCTTTCTACTCT
CCTTTTATCTCACTCTAGTCCAGGTGCCAAGAATTTCCCTTCTACCCTCTATTCTCTTGTGTCTGTAAGTTACAA
AGTCAGGAAAAGTCTTGGCTGGACCCCTTTCTGCTGGGTGGATGCAGTGGTCCAGGACTGGGGTCTGGGCCCAG
GTTTGAGGGAGAAGTTTGCAGAGCACTTCCACCTCTCTGAATAGTGTGTATGTGTTGATTATTGATTCTGTAA
ATAAGTAAAATGACAATATGAATCCTCCA

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FIGURE 564

MGCVFCKKLEPVATAKEDAGLEGDFRSYGAADHYGPDPTKARPASSFAHIPNYSNFSQAINPGFLDSGTIRGVS
GIGVTLFIALYDYEARTEDDLTFTKGEKFHILNNTGDDWWEARSLSSGKTGCIPSNYVAPVDSIQAEWYFGKIG
RKDAERQLLSPGNPQGAFLIRESETTKGAYSLSIRDWDQTRGDHVKHYKIRKLDMGYYITTRVQFNSVQELVQH
YMEVNDGLCNLLIAPCTIMKPQTLGLAKDAWEISRSSITLERRLGTGCFGDVWLGTWNGSTKVAVKTLKPGTMSP
KAFLEEAQVMKLLRHDKLVQLYAVVSEEPYIVTEFMCHGSLLDFLKNPEGQDLRLPQLVDMAAQVAEGMAYMER
MNYIHRDLRAANILVGERLACKIADFGLARLIKDDDEYNPCQGSKFPIKWTAPEAALFGRFTIKSDVWSFGILLTE
LITKGRIPYPGMNKREVLEQVEQGYHMPCPPGCPASLYEAMEQTWRLDPEERPTFEYLSFLEDYFTSAEPQYQP
GDQT

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FIGURE 565A

CGGAGAGGAGTCGGGATCTGCGCTGCAGCCACCGCCGCGGTTGATACTACTTTGACCTTCCGAGTGCAGTGAGGC
ATACATCACAATTTGGAATTATGCATTGGTTTATCAATTTACTTGTATTATTGTCACCCTGCTGCCAGATATGAC
TTCATGAGGACAGTGTATGTGTCTGAAATTGTGAACCATGAGTCTAGTACTTAATGATCTGCTTATCTGCTGC
CGTCAACTAGAACATGATAGAGCTACAGAACGAAAGAAAGAAGTTGAGAAATTTAAGCGCCTGATTGAGATCCT
GAAACAATTAACATCTAGATCGGCATTGAGATTCCAAACAAGGAAAATATTTGAATTGGGATGCTGTTTTTAGA
TTTTTACAGAAATATATTGAGAAAGAACAGAATGTCTGAGAATAGCAAAACCAAATGTATCAGCCTCAACACAA
GCCTCCAGGCAGAAAAAGATGCAGGAAATCAGTAGTTTGGTCAAATACTTCATCAAATGTGCAAACAGAAGAGCA
CCTAGGCTAAAAATGTCAAGAACTCTTAAATTATATCATGGATACAGTGAAAGATTTCATCTAATGGTGCTATTTAC
GGAGCTGATTGTAGCAACATACTACTCAAAGACATTCTTTCTGTGAGAAAATACTGGTGTGAAATATCTCAGCAA
CAGTGGTTAGAATTGTTCTCTGTGTACTTCAGGCTCTATCTGAAACCTTCACAAGATGTTTCATAGAGTTTTAGTG
GCTAGAATAATTTCATGCTGTTACCAAAGGATGCTGTTCTCAGACTGACGGATTAAATTCAAATTTTTGGACTTT
TTTTCCAAGGCTATTCAGTGTGCGAGACAAGAAAAGAGCTCTTCAGGTCTAAATCATATCTTAGCAGCTCTTACT
ATCTTCCTCAAGACTTTGGCTGTCAACTTTTGAATTGAGTGTGTGAATTAGGAGATGAAATCTTCCCACTTTG
CTTTATATTTGGACTCAACATAGGCTTAATGATTCTTTAAAAAGAGTCATTATTGAATTATTTCAACTGCAAATT
TATATCCATCATCCGAAAGGAGCCAAAACCCAAAGAAAAAGGTGCTTATGAATCAACAAAATGGAGAAGTATTTTA
TACAACCTATATGATCTGCTAGTGAATGAGATAAGTCATATAGGAAGTAGAGGAAAGTATTCTTCAGGATTTCTG
AATATTGCCGTCAAAGAAAATTTGATTGAATTGATGGCAGATATCTGTACCAGGTTTTTAATGAAGATACCAGA
TCCTTGGAGATTTCTCAATCTTACACTACTACACAAAAGAGAATCTAGTGATTACAGTGTCCCTTGCAAAAGGAAG
AAAAATAGAAGTGGCTGGGAAGTAATAAAAGATCACCTTCAGAAGTCACAGAATGATTTTGATCTTGTGCCTTGG
CTACAGATTGCAACCCAATTAATATCAAAGTATCCTGCAAGTTTACCTAAGTGTGAGCTGTCTCCATTACTGATG
ATACTATCTCAGCTTCTACCCCAACAGCGACATGGGGAACGTACACCATATGTGTTACGATGCCTTACGGAAGTT
GCATTGTGTCAAGACAAGAGGTCAAACCTAGAAAAGCTCACAAAAGTCAGATTTATTAATAACTCTGGAATAAAATT
TGGTGTATTACCTTTTCGTGGTATAAGTTCTGAGCAATACAAGCTGAAAACCTTTGGCTTACTTGGAGCCATAATT
CAGGGTAGTTTAGTTGAGGTTGACAGAGAATTCTGGAAGTTATTTACTGGGTGAGCCTGCAGACCTTCATGTCTCT
GCAGTATGCTGTTTGACTTTGGCACTGACCACCAGTATAGTTCCAGGAGCGGTAAAAATGGGAATAGAGCAAAAT
ATGTGTGAAGTAAATAGAAGCTTTTCTTTAAAGGAATCAATAATGAAATGGCTCTTATTCTATCAGTTAGAGGGT
GACTTAGAAAAATAGCACAGAAGTGCCTCCAATTCTTCACAGTAATTTTCTCATCTTGTACTGGAGAAAATCTCT
GTGAGTCTCACTATGAAAACTGTAAAGCTGCAATGAATTTTTTCCAAAGCGTGCCAGAATGTGAACACCACCAA
AAAGATAAAGAAGAAGCTTTTCACTCTCAGAAGTAGAAGAACTATTTCTTCAGACAACCTTTTGACAAGATGGACTTT
TTAACCATTGTGAGAGAATGTGGTATAGAAAAGCACCAGTCCAGTATTGGCTTCTCTGTCCACCAGAATCTCAAG
GAATCACTGGATCGCTGTCTTCTGGGATTATCAGAACAGCTTCTGAATAATTACTCATCTGAGATTACAAATTCA
GAACTCTTGTCCGGTGTTCACGTCTTTTGGTGGGTGTCCTTGGCTGCTACTGTTACATGGGTGTAATAGCTGAA
GAGGAAGCATATAAGTCAGAATTATTCCAGAAAGCCAACCTCTAATGCAATGTGCAGGAGAAAGTATCACTCTG
TTTAAAAATAAGACAAATGAGGAATTGAGAATTGGTTCCCTTGAGAAATATGATGCAGCTATGTACACGTTGCTTG
AGCAACTGTACCAAGAAGAGTCCAAATAAGATTGCATCTGGCTTTTTCTGCGATTGTTAACATCAAAGCTAATG
AATGACATTGCAGATATTTGTAAAAGTTTAGCATCCTTCATCAAAAAGCCATTTGACCGTGGAGAAGTAGAATCA
ATGGAAGATGATACTAATGGAAATCTAATGGAGGTGGAGGATCAGTCATCCATGAATCTATTTAACGATTACCTT
GATAGTAGTGTTAGTGATGCAAACGAACCTGGAGAGAGCCAAAGTACCATAGGTGCCATTAATCCTTTAGCTGAA
GAATATCTGTCAAAGCAAGATCTACTTTTCTTAGACATGCTCAAGTTCTTGTGTTTGTGTGTAAGTACTGCTCAG
ACCAATACTGTGTCCTTTAGGGCAGCTGATATTCGGAGGAAATTGTTAATGTTAATTGATTCTAGCACGCTAGAA
CCTACCAAATCCCTCCACCTGCATATGTATCTAATGCTTTTAAAGGAGCTTCCTGGAGAAGAGTACCCCTTGCCA
ATGGAAGATGTTCTTGAACCTTCTGAAACCACTATCCAATGTGTGTTCTTTGTATCGTCGTGACCAAGATGTTTGT
AAAATATTTTAAACCATGTCCTTCATGTAGTGAAAAACCTAGGTCAAAGCAATATGGACTCTGAGAACACAAGG
GATGCTCAAGGACAGTTTCTTACAGTAATTGGAGCATTTTGGCATCTAACAAAGGAGAGGAAATATATATCTCT
GTAAGAATGGCCCTAGTAAATTGCCTTAAACCTTTGCTTGAGGCTGATCCTTATTCAAAATGGGCCATTCTTAAT
GTAATGGGAAAAGACTTTTCTGTAAATGAAGTATTTACACAATTTCTTGCTGACAATCATACCAAGTTCGCATG
TTGGCTGCAGAGTCAATCAATAGATTGTTCCAGGACACGAAGGGAGATTCTTCAGGTTACTGAAAGCACTTCCT
TTGAAGCTTCAGCAAACAGCTTTTGAAAAATGCATACTTGAAAGCTCAGGAAGGAATGAGAGAAATGTCCCATAGT

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FIGURE 565B

GCTGAGAACCCTGAACTTTGGATGAAATTTATAATAGAAAATCTGTTTTACTGACGTTGATAGCTGTGGTTTTA
TCCTGTAGCCCTATCTGCGAAAAACAGGCTTTGTTTGCCCTGTGTAAATCTGTGAAAGAGAATGGATTAGAACCT
CACCTTGTGAAAAAGGTTTTAGAGAAAGTTTTCTGAAACTTTTGGATATAGACGTTTAGAAGACTTTATGGCATCT
CATTTAGATTATCTGGTTTTGGAATGGCTAAATCTTCAAGATACTGAATACAACCTTATCTTCTTTTCCTTTTATT
TTATTAACTACACAAATATTGAGGATTTCTATAGATCTTGTATAAGGTTTTGATTCCACATCTGGTGATTAGA
AGTCATTTTGATGAGGTGAAGTCCATTGCTAATCAGATTCAAGAGGACTGGAAAAGTCTTCTAACAGACTGCTTT
CCAAAGATTCTTGTAAATATTCTTCCTTATTTTGCCTATGAGGGTACCAGAGACAGTGGGATGGCACAGCAAAGA
GAGACTGCTACCAAGGTCTATGATATGCTTAAAAGTGAAAACCTTATTGGGAAAACAGATTGATCACTTATTCAAT
AGTAATTTACCAGAGATTGTGGTGGAGTTATTGATGACGTTACATGAGCCAGCAAATCTAGTGCCAGTCAGAGC
ACTGACCTCTGTGACTTTTCAGGGGATTTGGATCCTGCTCCTAATCCACCTCATTTCATCGCATGTGATTAAA
GCAACATTTGCCTATATCAGCAATTGTCATAAAACCAAGTTAAAAAGCATTTTAGAAATCTTTCCAAAAGCCCT
GATTCCCTATCAGAAAATTCTTCTTGCCATATGTGAGCAAGCAGCTGAAACAAATAATGTTTATAAGAAGCACAGA
ATTCTTAAAATATATCACCTGTTTGTAGTTTATTACTGAAAGATATAAAAAGTGGCTTAGGAGGAGCTTGGGCC
TTTGTCTTCGAGACGTTATTTATACTTTGATTCACTATATCAACCAAAGGCCTTCTTGTATCATGGATGTGTCA
TTACGTAGCTTCTCCCTTTGTTGTGACTTATTAAGTCAGGTTTGCCAGACAGCCGTGACTTACTGTAAGGATGCT
CTAGAAAACCATCTTCATGTTATTGTTGGTACACTTATACCCCTTGTGTATGAGCAGGTGGAGGTTGAGAAACAG
GTATTGGACTTGTGAAATACTTAGTGATAGATAACAAGGATAATGAAAACCTCTATATCACGATTAAGCTTTTA
GATCCTTTTCCCTGACCATGTTGTTTTTAAGGATTTGCGTATTACTCAGCAAAAAATCAAATACAGTAGAGGACCC
TTTTCACTCTTGGAGGAAATTAACCATTTTCTCTCAGTAAGTGTTTATGATGCACCTCCATTGACAAGACTTGAA
GGACTAAAGGATCTTCGAAGACAACCTGGAACCTACATAAAGATCAGATGGTGGACATTATGAGAGCTTCTCAGGAT
AATCCGCAAGATGGGATTATGGTGAAACTAGTTGTCAATTTGTTGCAGTTATCCAAGATGGCAATAAACCACACT
GGTGAAAAAGAAGTTCTAGAGGCTGTTGGAAGCTGCTTGGGAGAAGTGGGTCCTATAGATTTCTCTACCATAGCT
ATACAACATAGTAAAGATGCATCTTATACCAAGGCCCTTAAGTTATTTGAAGATAAAGAACCTTCAGTGGACCTTC
ATAATGCTGACCTACCTGAATAACACACTGGTAGAAGATTGTGTCAAAGTTCGATCAGCAGCTGTTACCTGTTTG
AAAAACATTTTAGCCACAAAGACTGGACATAGTTTCTGGGAGATTATAAGATGACAACAGATCCAATGCTGGCC
TATCTACAGCCTTTTAGAACATCAAGAAAAAAGTTTTAGAAGTACCCAGATTTGACAAAGAAAACCTTTTGAA
GGCCTGGATGATATAAATCTGTGGATTCTCTAAGTGAAAATCATGACATTTGGATAAAGACACTGACTTGTGCT
TTTTTGACAGTGGAGGCACAAAATGTGAAATCTTCAATTATTAAGCCAATGTGTGAAGTGAAAACCTGACTTT
TGTCAGACTGTACTTCCATACTTGATTCATGATATTTTACTCCAAGATACAAATGAATCATGGAGAAATCTGCTT
TCTACACATGTTTCCAGGATTTTTCACCAGCTGTCTTCGACACTTCTCGCAAACGAGCCGATCCACAACCCCTGCA
AACTTGGATTGAGAGTCAGAGCACTTTTCCGATGCTGTTTGGATAAAAAATCACAAAGAACAATGCTTGCTGTT
GTGGACTACATGAGAAGACAAAAGAGACCTTCTTCAGGAACAATTTTAAATGATGCTTTCTGGCTGGATTTAAAT
TATCTAGAAGTTGCCAAGGTAGCTCAGTCTTGTGCTGCTCACTTTACAGCTTTACTCTATGCAGAAATCTATGCA
GATAAGAAAAGTATGGATGATCAAGAGAAAAGAAGTCTTGCAATTTGAAGAAGGAAGCCAGAGTACAACCTATTTCT
AGCTTGAGTGAAAAAAGTAAAGAAGAACTGGAATAAGTTTACAGGATCTTCTCTTAGAAATCTACAGAAGTATA
GGGGAGCCAGATAGTTTGTATGGCTGTGGTGGAGGGAAGATGTTACAACCCATTACTAGACTACGAACATATGAA
CACGAAGCAATGTGGGGCAAAGCCCTAGTAACATATGACCTCGAAACAGCAATCCCCTCATCAACACGCCAGGCA
GGAATCATTGAGGCTTGCAGAATTTGGGACTCTGCCATATTCTTCCGTCTATTTAAAGGATTGGATTATGAA
AATAAAGACTGGTGTCTGAACTAGAAGAACTTCATTACCAAGCAGCATGGAGGAATATGCAGTGGGACCATTGC
ACTTCCGTCAGCAAAGAAGTAGAAGGAACCGATTACCATGAATCATTGTACAATGCTCTACAATCTCTAAGAGAC
AGAGAATTCTCTACATTTTATGAAAGTCTCAAATATGCCAGAGTAAAAGAAGTGGGAAGAGATGTGTAAGCGCAGC
CTTGAGTCTGTGATTTCGCTCTATCCCACACTTAGCAGGTTGCAGGCCATTGGAGAGCTGGAAAGCATTGGGGAG
CTTTTCTCAAGATCAGTCACACATAGACAACCTCTCTGAAGTATATATTAAGTGGCAGAAACACTCCAGCTTCTC
AAGGACAGTGATTTTAGTTTTTCAGGAGCCTATCATGGCTCTACGCACAGTCATTTTGGAGATCCTGATGGAAAAG
GAAATGGACAACCTCACAAAGAGAATGTATTAAGGACATTCTCACCAAACACCTTGTAAGAACTCTCTATACTGGCC
AGAATTTTCAAGAACTCAGCTCCCTGAAAGGGCAATATTTCAAATTAACAGTACAATTCAGTTAGCTGTGGA
GTCTCTGAGTGGCAGCTGGAAGAAGCACAAGTATTCTGGGCAAAAAAGGAGCAGAGTCTTGCCTGAGTATTCTC
AAGCAAATGATCAAGAAGTTGGATGCCAGCTGTGCAGCGAACAATCCCAGCCTAAAACCTTACATACACAGAATGT

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FIGURE 565C

CTGAGGGTTTGTGGCAACTGGTTAGCAGAAACGTGCTTAGAAAAATCCTGCGGTCATCATGCAGACCTATCTAGAA
AAGGCAGTAGAAGTTGCTGGAAATTATGATGGAGAAAGTAGTGATGAGCTAAGAAATGGAAAAATGAAGGCATTT
CTCTCATTAGCCCGGTTTTTCAGATACTCAATACCAAAGAATTGAAAACTACATGAAATCATCGGAATTTGAAAAAC
AAGCAAGCTCTCCTGAAAAGAGCCAAAGAGGAAGTAGGTCTCCTTAGGGAACATAAAATTCAGACAAACAGATAC
ACAGTAAAGGTTTCAGCGAGAGCTGGAGTTGGATGAATTAGCCCTGCGTGCACTGAAAGAGGATCGTAAACGCTTC
TTATGTAAAGCAGTTGAAAATTATATCAACTGCTTATTAAGTGGAGAAGAACATGATATGTGGGTATTCCGGCTT
TGTTCCCTCTGGCTTGAAAATTCTGGAGTTTCTGAAGTCAATGGCATGATGAAGAGAGACGGAATGAAGATTCCA
ACATATAAATTTTTGCCTCTTATGTACCAATTGGCTGCTAGAATGGGGACCAAGATGATGGGAGGCCTAGGATTT
CATGAAGTCCTCAATAATCTAATCTCTAGAATTTCAATGGATCACCCCATCACACTTTGTTTATTATACTGGCC
TTAGCAAATGCAAACAGAGATGAATTTCTGACTAAACCAGAGGTAGCCAGAAGAAGCAGAATAACTAAAAATGTG
CCTAAACAAAGCTCTCAGCTTGATGAGGATCGAACAGAGGCTGCAAATAGAATAATATGTACTATCAGAAGTAGG
AGACCTCAGATGGTCAGAAGTGTTGAGGCACTTTGTGATGCTTATATTATATTAGCAAACCTAGATGCCACTCAG
TGGAAGACTCAGAGAAAAGGCATAAATATTCCAGCAGACCAGCCAATTACTAAACTTAAGAATTTAGAAGATGTT
GTTGTCCCTACTATGGAAATTAAGGTGGACCACACAGGAGAATATGGAAATCTGGTGACTATACAGTCATTTAA
GCAGAATTTTCGCTTAGCAGGAGGTGTAAATTTACCAAAAAATAATAGATTGTGTAGGTTCCGATGGCAAGGAGAGG
AGACAGCTTGTTAAGGGCCGTGATGACCTGAGACAAGATGCTGTCATGCAACAGGTCTTCAGATGTGTAATACA
TTACTGCAGAGAAACACGGAACCTAGGAAGAGGAAATTAACATCTGTACTTATAAGGTGGTTCCCTCTCTCAG
CGAAGTGTTGTTCTTGAATGGTGACAGGAACCTGTCCCCATTGGTGAATTTCTTGTTAACAATGAAGATGGTGCT
CATAAAAGATACAGGCCAAATGATTTTCAGTGCCCTTTTCAGTGCCAAAAGAAAATGATGGAGGTGCAAAAAAAGTCT
TTTGAAGAGAAATATGAAGTCTTCATGGATGTTTGCCAAAATTTTCAACCAGTTTTCCGTTACTTCTGCATGGAA
AAATTCCTGGATCCAGCTATTTGGTTTTGAGAAGCGATTGGCTTATACGCGCAGTGTAGCTACTTCTTCTATTGTT
GGTTACATACCTGGACTTGGTGATAGACATGTACAGAATATCTTGATAAATGAGCAGTCAGCAGAACCTGTACAT
ATAGATCTAGGTGTTGCTTTTTGAACAGGGCAAAATCCTTCTACTCCTGAGACAGTTTCCTTTTAGACTCACCAGA
GATATTGTGGATGGCATGGGCATTACGGGTGTTGAAGGTGTCTTCAGAAGATGCTGTGAGAAAACCATGGAAGTG
ATGAGAACTCTCAGGAACTCTGTTAACCATGTAGAGGTCTTCTATATGATCCACTCTTTGACTGGACCATG
AATCCTTTGAAAGCTTTGTATTTACAGCAGAGGCCGGAAGATGAACTGAGCTTCACCCTACTCTGAATGCAGAT
GACCAAGAATGCAAACGAAATCTCAGTGATATTGACCAGAGTTTCAACAAAGTAGCTGAACGTGTCTTAATGAGA
CTACAAGAGAACTGAAAGGAGTGGAAGAAGGCACTGTGCTCAGTGTTGGTGGACAAGTGAATTTGCTCATACAG
CAGGCCATAGACCCCAAAAATCTCAGCCGACTTTTCCCAGGATGGAAAGCTTGGGTGTGATCTTCAGTATATGAA
TTACCCTTTCATTACGCCTTTAGAAATTATATTTTAGCCTTTATTTTTAACCTGCCAACATACTTTAAGTAGGGA
TTAATATTTAAGTGAATATTGTGGGTTTTTTTTGAATGTTGGTTTTAATACTTGATTTAATCACCCTCAAAAAAT
GTTTTGATGGTCTTAAGGAACATCTCTGCTTTCACTCTTTAGAAATAATGGTCATTTCGGGCTGGGCGCAGCGGCT
CACGCCGTGAATCCCAGCACTTTGGGAGGCCGAGGTGAGCGGATCACAAGTTCAGGAGTTCGAGACCAGCCTGGC
CAAGAGACCAGCCTGGCCAGTATGGTGAAACCTGTCTCTACTAAAAATACAAAAATTAGCCGAGCATGGTGCGC
GGCACCTGTAGTCCCAGCTACTCGAGAGGCTGAGGCAGGAGAATCTCTGAACCTGGGAGGTGAAGGTTGCTGTG
GGCCAAAATCATGCCATTGCACTCCAGCCTGGGTGACAAGAGCGAACTCCATCTCAAAA

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FIGURE 566

MTLHEPANSSASQSTDLCDFSGDLDPAPNPPHFP SHVIKATFAYISNCHKTKLKSILEILSKSPDSYQKILLAI
EQAAETNNVYKKHRILKIYHLFVSLLLKDIKSGLGGAWAFVLRDVIYTLIHYINQRPSCIMDVSLRSFSLCCDLL
SQVCQTAVTYCKDALENHHLHVIVGTLIPLVYEQVEVQKQVLDLLKYLVIDNKNENLYITIKLLDPFPDHVVKD
LRITQQKIKYSRGPFSLLLEEINHFLSVSVYDALPLTRLEGLKDLRRQLELHKDQMVDIMRASQDNPDGIMVKLV
VNLLQLSKMAINHTGEKEVLEAVGSCLEGEVGPIDFSTIAIQHSDKASYTKALKLFEDKELQWTFIMLTLYLNNTLV
EDCVKVRSAAVTCLKNILATKTGHSFWEIYKMTTDPMLAYLQPFRTSRKKFLEVPRFDKENPFEGGLDDINLWIPL
SENHDIWIKTLTCAFLDSGGTKCEILQLLKPMCEVKTDFCQTVLPYLIHDILLQDTNESWRNLLSTHVQGFFTSC
LRHFSQTSRSTTPANLDESEHFFRCCLDKKSQRTMLAVVDYMRQKRPSSGTIFNDAFWLDLNYLEVAKVAQSC
AAHFTALLYAEIYADKKSMDDQEKSLAFEEGSQSTTISSSEKSKEETGISLQDLLLEIYRSIGEPDSLYGCGG
GKMLQPITRLRTEHEAMWGKALVTYDLETAIPSSSTRQAGIIQALQNLGLCHILSVYLKGLDYENKDWCPLEEL
HYQAAWRNMQWDHCTSVSKEVEGTSYHESLYNALQSLRDREFSTFYESLKYARVKEVEEMCKRSLESVYSLYPTL
SRLQAIGELESIGELFSRSVTHRQLSEVYIKWQKHSQLLKDSDFSQEPIMALRTVILEILMEKEMDNSQRECIK
DILTKHLVELSILARTFKNTQLPERAIFQIKQYNSVSCGVSEWQLEEAQVFWAKKEQSLALSILKQMIKKLDASC
AANNPSLKLTYTECLRVCGNWLAEETCLENPAVIMQTYLEKAVEVAGNYDGESSDELNGMKMAFLSLARFSDTQY
ORIENYMKSSSEFENKQALLKRAKEEVGLLREHKIQTNRYTVKVQRELELDELALRALKEDRKRFLCKAVENYINC
LLSGEEHDMWVFRCLSLWLENSGVSEVNGMMKRDGMKIPTYKFLPLMYQLAARMGTMMGGLGFHEVLNLLISRI
SMDHPHHTLFIILALANANRDEFLTKEVARRSRITKNVPKQSSQLDEDRTEAANRIICTIRSRPQMVRVSVEAL
CDAYIILANLDATQWKTQRKGINIPADQPIITKLKNLEDVVVPTMEIKVDHTGEYGNLVTIQSFKAEFRLAGGVNL
PKIIDCVGSDGKERRQLVKGRDDLQDAVMQQVFQMCNTLLQRNTETRKRKLTICTYKVVPLSQRSQVLEWCTGT
VPIGEFLVNEDGAHKRYRPNDFSAFQCQKMMEVQKKSFEKYEVEFMDVCQNFQPVFRYFCMEKFLDPAIWFEK
RLAYTRSVATSSIVGYILGLGDRHVQNILINEQSAELVHIDLGVAFEQGKILPTPETVPFRLTRDIVDGMGITGV
EGVFRRCCEKTMEVMRNSQETLLTIVEVLLYDPLFDWTMNPALKALYLQQRPEDETELHPTLNADDQECKRNLSDI
DQSFNKVAERVLMLRLOEKLKGVEEGTVLSVGGQVNLLIQQAIDPKNLSRLFPGWKAWV

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FIGURE 567

CGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCGGT
ACCCGGGACCCCAGCCCGGCCGCTCGCCCGCAGCCCGCCGGCCGCACACGTCCCCGGAGCCGGGCCCTAGGGCGGG
CGGCAGCGGGCGGCTCGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCC**ATG**CCCGCGGCCGGCTGGCGGGACGGCT
CCGGCCAGGAGAAGTACCGGCTCGTGGTGGTCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTCA
TCCAGTCCTATTTTGTAAACGGATTATGATCCAACCATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGACA
GAGCAGCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGGA
CTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTGAAGAAATCTATAAGTTTCAAAGAC
AGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAATTGGTAATAAAGCAGATCTGGATCATCAAA
GACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAGA
TTAGGATGAATGTAGATCAAGCTTTCATGAACCTTGTCGGGTATCAGGAAATTTCAAGAGCAGGAATGTCCTC
CTTCACCAGAAACCAACACGGAAAGAAAAAGACAAGAAAGGCTGCCATTGTGTCATTTTCT**TAGA**ATCCCTTCAGTT
TTAGCTACCAACGGCCAGGAAAAGCCCTCATCTTCTCTTCTCTCCTCAGTTTACATCTTGTGGTACCTTTCTA
GCCTTAGACAAATGATCACCATGTTAGCCTTAGACCAAGAAGCTGGCTAGTCCTTTCTGTGAAGCTAATACAATG
GTCATTTCCAGACAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCTTTAAATATATGTCT
ATATACACAGACATGCTCTTTTTTTTAAGTGCTTACATTTTAATAGAGATGAATCAGTTTGGAAATCTAAGCTGTT
TGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTTAACTTTTGGAAATCATACTGCCTACTGTTACTCTAAATAG
AAATATAGGGTTTTTTTTTAATGTGAATTTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTTAACCTTAAA
TACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACTTTTGTTTTCTGATGGCC
AAAATACCAAATGCCTGTTGTATTTATGGATTAAAAACTGCTTATAAAAAAAAAAAAAAAAAA

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FIGURE 568

MAAAGWRDGSQGEKYRLVVVGGGGVGKSALTIQFIQSYFVTDYDPTIEDSYTKQCVIDDRAARLDILDTAGQEEF
GAMREQYMRTGEGFLLVFSVTDGRSFEEIYKFQRQILRVKDRDEFPMILIGNKADLDHQRQVTQEEGQQLARQLK
VTYMEASAKIRMNVDQAFHELVIRKFEQECPPSPEPTRKEKDKKGCHCVIF

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FIGURE 569

AAAATGTGCTTCTTACAGGAATATAAATAGTTTCTGGAAAGGACACTGACAACCTCAAAGCAAAATGAAGTTCTT
TCTGTTGCTTTTCACCATTGGGTTCTGCTGGGCTCAGTATTCCTCCAAATACACAACAAGGACGGACATCTATTGT
TCATCTGTTTGAATGGCGATGGGTTGATATTGCTCTTGAATGTGAGCGATATTTAGCTCCGAAGGGATTGGAGG
GGTTCAGGTCTCTCCACCAATGAAAATGTTGCAATTTACAACCTTTTCAGACCTTGGTGGGAAAGATAACCAACC
AGTTAGCTATAAATTATGCACAAGATCTGGAAATGAAGATGAATTTAGAAAACATGGTGAAGTAGATGTAACAATGT
TGGGGTTCGTATTTATGTGGATGCTGTAATTAATCATATGTGTGGTAACGCTGTGAGTGCAGGAACAAGCAGTAC
CTGTGGAAGTTACTTCAACCTGGAAGTAGGGACTTTCCAGCAGTCCCATATTCTGGATGGGATTTCAATGATGG
TAAATGTAAAACTGGAAGTGGAGATATCGAGAAGTACAATGATGCTACTCAGGTCAGAGATTGTCGTCTGACTGG
TCTTCTTGATCTTGCACCTGGAGAAGGATTACGTGCGTTCTAAGATTGCCGAATATATGAACCATCTCATTGACAT
TGGTGTGCAGGGTTCAGACTTGATGCTTCCAAGCACATGTGGCCTGGAGACATAAAGGCAATTTTGGACAAACT
GCATAATCTAAACAGTAACTGGTTCCCTGCAGGAAGTAAACCTTTCAATTTACCAGGAGGTAATTGATCTGGGTGG
TGAGCCAATTAAAAGCAGTGACTACTTTGGTAATGGCCGGGTGACAGAATTCAAGTATGGTGCAAACTCGGCAC
AGTTATTGCAAGTGAATGGAGAGAAGATGTCTTACTTAAAGAACTGGGGAGAAGGTTGGGGTTTCGTACCTTC
TGACAGAGCGCTTGCTTTTGTGGATAACCATGACAATCAACGAGGACATGGGGCTGGAGGAGCCTCTATTCTTAC
CTTCTGGGATGCTAGGCTGTACAAAATGGCAGTTGGATTTATGCTTGCTCATCCTTACGGATTTACACGAGTAAT
GTCAAGCTACCGTTGGCCAAGACAGTTTCAAATGGAAACGATGTTAATGATTGGGTTGGGCCACCAAATAATAA
TGGAGTAATTAAAGAAGTTACTATTAATCCAGACACTACTTGTGGCAATGACTGGGTCTGTGAACATCGATGGCG
CCAAATAAGGAACATGGTTATTTTCCGCAATGTAGTGGATGGCCAGCCTTTTACAAATTGGTATGATAATGGGAG
CAACCAAGTGGCTTTTGGGAGAGGAAACAGAGGATTCATTGTTTTCAACAATGATGACTGGTCATTTTCTTTAAC
TTTGCAAACTGGTCTTCCCTGCTGGCACATACTGTGATGTCATTTCTGGAGATAAAATTAATGGCAATTGCACAGG
CATTAAAAATTTACGTTTCTGATGATGGCAAAGCTCATTTTTCTATTAGTAACTCTGCTGAAGATCCATTTATTGC
AATTCATGCTGAATCTAAATTGTAATTTTAAATTTAAATGTCATGTCCTCAAAACAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAA

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FIGURE 570

MKFFLLLEFTIGFCWAQYSPNTQQGRTSIVHLFEWRWVDIALECERYLAPKGFGGVQVSPPNENVAIYNPFRPWWE
RYQPVSYKLCTRSGNEDEFNMVTRCANNVGVRIYVDAVINHMCNAVSAGTSSTCGSYFNPGSRDFPAVPYSGWD
FNDGKCKTGSGDIENYNDATQVRDCRLTGLLDLALEKDYVRSKIAEYMNHLIDIGVAGFRLDASKHWPFGDIKAI
LDKLHNLNSNWFPAGSKPFIYQEVIDLGGEPIKSSDYFGNGRVTEFKYGAKLGTVIRKWNGEKMSYLKNWGEWG
FVP SDRALVFVDNHDNQRGHGAGGASILTFWDARLYKMAVGFM LAHPYGFTRVMSSYRWPRQFQNGNDVNDWVG
PNNNGVIKEVTINPDITTCGNDWVCEHRWRQIRNMVIFRNVVDGQPFNTWYDNGSNQVAFGRGNRGFIVFNDDWS
FSLTLQTGLPAGTYCDVISGDKINGNCTGIKIYVSDDGKAHFSISNSAEDPFI A IHAESKL

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FIGURE 571A

TCTAGATGGGGGTCTGGGCCCCAGGGTGTGCAGCCACTGACTTGGGGACTGCTGGTGGGGTAGGGATGAGGGAG
GGAGGGGCATTGTGATGTACAGGGCTGCTCTGTGAGATCAAGGGTCTCTTAAGGGTGGGAGCTGGGGCAGGGACT
ACGAGAGCAGCCAGATGGGCTGAAAGTGAAGTCAAGGGGTTTCTGGCACCTACCTACCTGCTTCCCGCTGGGGG
GTGGGGAGTTGGCCCAGAGTCTTAAGATTGGGGCAGGGTGGAGAGGTGGGCTCTTCTGCTTCCCACTCATCTTA
TAGCTTTCTTTCCCCAGATCCGAATTCGAGATCCAAACCAAGGAGGAAAGGATATCACAGAGGAGATCATGCTCTG
GGGCCCCGACTGCCTCCACACCCACCCCTCCCCAGACGGGAGGCAGTCTGGAGCCTCAAGCTAATGGGGAGACGC
CCCAGGTTGCTGTCAATTGTCCGGCCAGATGACCGGTACAGGGAGCAATCATTGCTGACCGGCCAGGGCTGCCTG
GCCCAGAGCATAGCCCTTCAGAATCCCAGCCTTCGTCGCCTTCTCCGACCCCATCACCATCCCCAGTCTTGGAAC
CGGGGTCTGAGCCTAATCTCGCAGTCTCTCTATTCTGGGGACACTATGACAACTATACAAATGTCTGTAGAAG
AATCAACCCCATCTCCCGTGAACTGGGGAGCCATATCGCCTCTCTCCAGAACCCACTCCTCTCGCCGAACCCA
TACTGGAAGTAGAAGTGACACTTAGCAAACCGGTTCCAGAATCTGAGTTTTCTTCCAGTCTCTCCAGGCTCCCCA
CCCCTTTGGCATCTCACACAGTGGAATTCATGAGCCTAATGGCATGGTCCCATCTGAAGATCTGGAACCAGAGG
TGGAGTCAAGCCCAGAGCTTGCTCCTCCCCAGCTTGCCCCCTCCGAATCCCCTGTGCCATTGCTCCAAGTCCCC
AACCTGAGGAAGTGTCAACGGAGCCCCCTCGCCACCAGCTGTGGACTTAAGCCAGTCAGTGAGCCAGAGGAGC
AGGCCAAGGAGGTGACAGCATCAGTGGCGCCCCCACCATCCCCTCTGCTACTCCAGCTACGGCTCCTTCAGCTA
CTTCCCCAGCTCAGGAGGAGGAAATGGAAGAAGAAGAAGATGAGGAAGAAGGAGAAGTAGGGGAAGCAGGGGAAG
GTGAGAGTGAGAAGAGAGGAGAGGAAGTCTCCCCCAGAGAGTACCCCTATTCCAGCCAAGTGTCTCAGAATT
TGGAGGCAGCAGCAGCCACTCAAGTGGCAGTATCTGTGCCAAAGAGGAGACGGAAAATTAAGGAGCTAAATAAGA
AGGAGGCTGTTGGAGACCTTCTGGATGCCTTCAAGGAGGCGAACCCGGCAGTACCAGAGGTGGAATCAGCCTC
CTGCAGGCAGCAATCCAGGCCCAGAGTCTGAGGGCAGTGGTGTGCCCCACGTCTGAGGAAGCAGATGAGACCT
GGGACTCAAAGGAAGACAAAATTCACAATGCTGAGAACATCCAGCCCCGGGAACAGAAGTATGAATATAAGTCAG
ATCAGTGGAAGCCTCCAAACCTAGAGGAGAAAAACGTTACGACCGTGAGTTCCTGCTTGGTTTTAGTTTCATCT
TTTGCCAGATGCAGAAGCCAGAGGGATTGCCACATATCAGTGACGTGGTGTGGACAAGGCCAATAAAACACCAC
TGCGGCCACTGGATCCCCTAGACTACAAGGCATAAATTGTGGCCAGACTTCACTCCATCCTTTGCCAACCTTG
GCCGGACAACCCCTTAGCACCCGTGGGCCCCCAAGGGGTGGGCCAGGTGGGGAGCTCGCCCGTGGCGCGCAGGCTG
GCCTGGGACCCCGCGCTCTCAGCAGGGACCCCGAAAAGAACCAAGATCATTGCCACAGTGTTAATGACCG
AAGATATAAACTGAACAAAGCAGAGAAAGCCTGGAACCCAGCAGCAAGCGGACAGCGGCTGATAAGGATCGAG
GGGAAGAAGATGCTGATGGCAGCAAAACCCAGGACCTATTCCGCAGGTGGCGCTCCATCCTGAATAAACTGACAC
CCCAGATGTTCCAGCAGCTGATGAAGCAAGTGACGCAGCTGGCCATCGACACCGAGGACGCCTCAAAGGGGTGAT
TGACCTCATTTTTGAGAAGGCCATTTAGAGCCCAACTTCTCTGTGGCCTATCCAACATGTGCCGCTGCCTCATG
GCGCTGAAAGTGCCCACTACGGAAGCCAACAGTGACTGTGAACTCCGAAAGCTGTTGTTGAATCGATGTCAGA
AGGAGTTTGAGAAAGACAAAGATGATGATGAGGTTTTTGAGAAGAAGCAAAAAGAGATGGATGAAGCTGCTACGG
CAGAGGAACGAGAACGCCCTGAAGGAGGAGCTGGAAGAGGCTCGGGACATAGCCCGGCGCTGCTCTTTAGGGAATA
TCAAGTTTATTGGAGAGTTGTTCAAAGTGAAGATGTTAAGAGAGGCAATAATGCATGACTGTGTGGTCAAAGTGC
TTAAGAACCATGATGAAGAGTCCCTTGAGTGCCTTTGTGCTGCTCACCACCATTGGCAAAGACCTGGACTTTG
AAAAAGCCAAGCCCCGAATGGATCAGTATTTCAACCAGATGGAAAAAATCATTAAAGAAAAGAAGACGTCATCCC
GCATCCGCTTTATGCTGCAGGACGTGCTGGATCTGCGAGGGAGCAATTGGGTGCCACGCCGAGGGGATCAGGGTC
CAAGACCATTGACCAGATCCATAAGGAGGCTGAGATGGAAGACATCGAGAGCACATCAAAGTGCAGCAGCTCATG
CAAGGGCAGTGACAAGCGTCGGGGCGGTCTCCAGGCCCTCCCATCAGCCGTGGACTTCCCCTTGTGGATGATGG
TGGCTGACACAGTTCCCATCAGCAAAGGTAGCCGCCCCATTGACACCTCACGACTACCAAGATACCAAGCCTG
GCTCCATCGATTCTAACAACCAGCTCTTTGCACCTGGAGGGCGACTGAGCTGGGGCAAGGGCAGCAGCGGAGGGT
CAGGAGCCCAGCCCTCAGACGCAGCATCAGAAGCTGCTCGCCAGCTACTAGTACTTTGATTGCTTCTCAGCCC
TTCAACAAGCGGTACCCACAGAAAGCACAGATAATAGACGTGTGGTGCAGAGGAGTAGCTTGAGCCGAGAACGAG
GCGAGAAAGCTGGAGACCGAGGAGACCGCCTAGAGCGAGTGAACGGGGAGGGGACCGTGGGGACCGGCTTGATCG
TGTCGCGGACACCTGCTACCAAGCGGACGTTAGCAAGGAAGTGGAGGAGCGGAGTAGAGAACGGCCCTCCCAGC
CTGAGGGGGCTGCGCAAGGCAGTAGCCTCACGGAGGATCGGGACCGTGGGCGGGATGCCGTGAAGCGAGAAGCTG
CCCTACCCCCAGTGAGCCCCCTGAAGGCGGCTCTCTCTGAGGAGGAGTTAGAGAAGAAATCCAAGGCTATCATTG
AGGAATATCTCCATCTCAATGACATGAAAGAGGCAGTCCAGTGCCTGCAGGAGCTGGCCTCACCCCTCCTTGCTCT

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FIGURE 571B

TCATCTTTGTACGGCATGGTGTGCGAGTCTACGCTGGAGCGCAGTGCCATTGCTCGTGAGCATATGGGGCAGCTGC
TGCACCAGCTGCTCTGTGCTGGGCATCTGTCTACTGCTCAGTACTACCAAGGGTTGTATGAAATCTTGGAATTGG
CTGAGGACATGGAAATTGACATCCCCACGTGTGGCTCTACCTAGCGGAACTGGTAACACCCATTCTGCAGGAAG
GTGGGGTGCCCATGGGGGAGCTGTTTCAGGGAGATTACAAAGCCTCTGAGACCGTTGGGGCAAAGCTGCTTCCCTGT
TGCTGGAGATCCTGGGCCTCCTGTGCAAAAGCATGGGTCCATAAAAGGTGGGGACGCTGTGGCGAGAAGCCGGGC
TTAGCTGGAAGGAATTTCTACCTGAAGGCCAGGACATTGGTGCATTTCGTCGCTGAACAGAAGGTGGAGTATACCC
TGGGAGAGGAGTCGGAAGCCCCTGGCCAGAGGGCACTCCCTCCGAGGAGCTGAACAGGCAGCTGGAGAAGCTGC
TGAAGGAGGGCAGCAGTAACCAGCGGGTGTTCGACTGGATAGAGGCCAACCTGAGTGAGCAGATAGTATCCAACA
CGTTAGTTCGAGCCCTCATGACGGCTGTCTGCTATTCTGCAATTATTTTTGAGACTCCCTCCGAGTGGACGTTG
CAGTGCTGAAAGGCGACATAGTGCTGCAGAAATACCTGTGTGACGAAGCAGAAGGAGCTACAGGCGCTCTACGCC
TCCAGGCCCTTGTAGTGACCTTAGAACAGCCTCCCAACCTGCTGCGGATGTTCTTTGACGCACTGTATGACGAGG
ACGTGGTGAAGGAGGATGCCTTCTACAGTTGGGAGAGTAGCAAGGACCCCGCTGAGCAGCAGGGCAAGGGTGTGG
CCCTTAAATCTGTACAGCCTTCTTCAAGTGGCTCCGTGAAGTCAGAGGAGGAGTCT**TG**ACCACAAGTGAAGGGCTG
GTGGGGCCGGGGACCTGGAGCCCCATGGACACACAGATGGCTCCGGCTAGCCGCCTGGACTGCAGGGGGGCGGCA
GCAGCGGCGGTGGCAGTGGGTGCCTGTAGTGTGATGTGTCTGAACTAATAAAGTGGCTGAAGAGGCAGGATGGCT
TGGGGCTGCCTGGGCCCCCTCCAGGATGCCGCCAGGTGTCCCTCTCCTCCCTGGGGCACAGAGATATATTATA
TATAAAGTCTTGAAAATTTTGAAATTTGGTGTGTCTTGGGGTGGGGAGGGGCACCAACGCCTGCCCCCTGGGGTCC
TTTTTTTTATTTTCTGAAAATCACTCTCGGACTGCCGTCCCTCGCTGCTGGGCATATGCCCCAGCCCCTGTACCAC
CCCTGCTGTTGCCTGGGCAGGGGGAAGGGGGGCACGGTGCCTGTAATTATTAAACATGAATTCAATT

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FIGURE 572

MSGARTASTPTPPQTGGSLPQANGETPQVAVIVRPDDRSQGAI IADRPGLPGPEHSPSESQPSSPSPTPSPSPV
LEPGSEPNLAVLSIPGDTMTTIQMSVEESTPI SRETGEPYRLSPEPTPLAEP ILEVEVTL SKPVPESEFSSSPLQ
APTPLASHTVEIHEPNGMVPSEDLEPEVESSPELAPPPACPSESPV IAPTAQPEELLNGAPSPPAVDLSPVSEP
EEQAKEVTASVAPPTIP SATPATAPSATSPAQEEEMEEEEDEEEGEVGEAGEGESEKRGELLPPPESTPI PANLS
QNLEAAAATQVAVSVPKRRRKIKELNKKEAVGDLLDAFKEANPAVPEVENQPPAGSNPGPESESGVPPRPEEAD
ETWDSKEDIHNAENIQPGEQKYEYKSDQWKPPNLEKKRYDREFLLGFQFIFCQMOKPEGLPHISDVVLDKANK
TPLRPLDPTRLQGINCGPDFTPSFANLGRITTLSTRGPPRGPGGELARGAQAGLGPRRSQQGPRKEPRKI IATVL
MTEDIKLNKAEKAWKPSSKRTAADKDRGEEDADGSKTQDLFRRWRSILNKLTPOMFQQLMKQVTQLAIDTEDASK
GSLTSFLRRPFQSPTSLWPIQHVPLPHGAESAHYGKPTVTVNFRKLLLNRCQKEFEKDKDDDEVFEKKQKEMDEA
ATAEERERLKEELEEARDIARRCSLGNIKFIGELFKLKMLTEAIMHDCVVKLLKNHDEESLECLCRLLTITIGKDL
DFEKAKPRMDQYFNQMEKIIKEKKTSSRIRFMLQDVLDLRGSNWVPRRGDQGPRPLTRSIRRLRWKTSRAHQSA
AHARAVTSVGAVLQALPSAVDFPLWMMVADTVPI SKGSRPIDTSRLTKITKPGSIDSNNQLFAPGGRLSWGKGSS
GGSGAQPSDAASEAARPATSTLIRFSALQQAVPTTESTDNRRVVQRSSLSRERGEKAGDRGDRLERVNGEGTVGTG
LIVSRTPATKRTFSKEVEERSRERPSQPEGLRKAASLTEDRDRGRDAVKREAAALPPVSPLKAALSEEELEKKS
IIEEYLHLNDMKEAVQCQELASPSLLFIFVRHGVESTLERSAIAREHMGQLLHQLLCAGHLSTAQYYQGLYEIL
ELAEDMEIDIPHVWLYLAELVTPILQEGGVPMGEIFREITKPLRPLGKAASLLLEILGLLCKSMGPKKVGTILWRE
AGLSWKEFLPEGQDIGAFVAEQKVEYTLGEESEAPGQRALPSEELNRQLEKLLKEGSSNQRVFDWIEANLSEQIV
SNTLVRALMTAVCYSAIIFETPLRVDVAVLKGDIVLQKYLCD EAGATGALRLQALVVTLEQPPNLLRMFFDALY
DEDVVKEDAFYSWESSKDPAEQQGKGVALKSVTAFFKWLREVRGGV

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FIGURE 573

GGTAAGAGAAGACTGGAAGCATGTTCGGAGTTTTGGTTAATTTCTGCCCTGGCGATAAGGAAAATTTGCAAGCTC
TGGAGAGGATGAATACTGTAACCTCCAAGTCCAACCTGTCTTATAATACCAAATTCGCTATTCTGACTTCAAGG
TGGGGACCTTGGATTCCCTGGTTGGCCTCTCTGATGAGTTGGGGAAAACCTCGACACCTTTGCTGAAAGCCTCATAA
GGAGAAATGGCTCAGAGCGTGGTGGAAAGTCATGGAGGACTCAAAGGGGAAGGTCCAGGAGCACCTCCTGGCAAACG
GAGTTGACTTAAACATCCTTTGTGACCCACTTTGAATGGGACATGGCCAAATATCCTGTCAAGCAGCCGCTCGTGA
GTGTGGTGGACACAATAGCCAAGCAACTGGCGCAGATCGAGATGGACCTGAAGTCCCGAACGGCCGCTACGACA
CTCTGAAGACAAACCTGGGAAACCTGGAAAAGAAATCCATGGGGAACCTCTTACCCGGACACTGAGTGATATTG
TGAGCAAAGAGGACTTCGTGCTGGATTCTGAATATCTCGTCACACTTCTGGTCATCGTCCCCAAACCAAACACTACT
CACAATGGCAAAAAACCTACGAATCTCTCTCAGACATGGTGGTCCCTCGATCAACCAAACCTCATTACTGAGGACA
AGGAAGGGGGCCTTTTACTGTGACTCTGTTTCGAAAAGTGATTGAAGATTTCAAACCAAGGCCAAAGAAAACA
AGTTCACTGTTCTGTAATTTTACTATGATGAGAAGGAAATTGAAAGGGAAAGGGAGGAGATGGCCAGATTGCTGT
CTGATAAGAAGCAACAGTATGGCCCCCTGCTGCGCTGGCTCAAGGTGAACCTTCAGTGAAGCCTTCATTGCCTGGA
TCCACATCAAGGCCCTGAGAGTGTGTTGTGGAGTCCGTGCTCAGGTATGGACTACCAGTGAACCTCCAGGCAGTGC
TCCTGCAGCCGCATAAGAAGTCATCCACCAAGCGTTTAAAGAGAGGTTCTAAACTCTGTCTTCCGACATCTGGATG
AAGTAGCCGCTACAAGTATACTGGATGCATCTGTGGAGATCCCGGGACTGCAACTCAATAACCAAGACTATTTTC
CTTATGTCTACTTCCATATTGACCTTAGTCTTCTTGACTAGAAAGGCCAGCTGGCACCTCTGTCTCATGTTCTGTG
CAGATTATTACAGACACCTCTTCTTTAGCCAGAGAATGGTTCAAATGTCTTACAGAACTAAGATCTTTTTTCAG
AGAAATTGCTCACAAAAGTTAGTGACAGTTGTATTTATTTTTTAAAGTTACAATAAAATGCTCTCAAGTCCTTTG
AATGTTCCAACAAATTCAAACCTTCATTTTCTGAATGTTTTACATAAAATGCGAACTACCTGTTTCGATTGGTAAC
CTGCTGCTGTATTTTCATGTCTTAACGGCTATTTTGAGGTTTCATTAACAACATAGAAAGCCTTGAAGTGTATAACC
AGCTAGATTCCTTAATAATTAGTCACTAGAGACAGCCCAAAGACAAATATTGGGCAGGAAATCAGTTCTCACTGA
GCCCCGTTTTCCATGTAAATCTCTGTTGTGGTGGGCATAGGTGGCACCATCTAAAGAAAAGAGGTCTTGTTTTTT
GTTTAAAAAAGTTTGTGGGGAGGAAAGACATCTGTGTATCACTTCAAATATTGATTTACTGCTAAACATCACTC
TGAATTTATGATGTGGATACTAACTTCATACATTTATCGGCATTGTCCAAATATTTTATTCTTTAATGGAAAA
GCCATTAATATTCAAATGAAGGGATCACATTAATAAAAAACCCATACATAAGAAACAGCCTCCAAGAACATTCAAG
CAGCAGTCAGAGAGAAAAATGTTTCGACAGCCAAGTTTTCTTCAAATATTATGTGACAGAATACGACTCAATTC
ACCGGCTACAACAATTATAGAAATTTTTCAATGTTTTCTTGAGATGCAAAAGTTCACTGTTGCAGTGTTCAAA
TGACCAATCAAGTACTACTTCTTGTTTAAAGGCCACTGGTAGAGTCATCTGAGTGTAGAGAATGTCCCTTCACT
GCTGGAAAAATCCACTGGCTCCCAAGAAAAGAAAATGGTCTGAAGCCTCTGTTGTGGCTCTCACAACCTCATCTTT
CCCTAAGTCATCAAGCTCCACATCACTGAGGTCAATGTATCTCCACGGGAAGCTGGGAGACGACAGAAAGCCA
CTGTTAGATCTGCAGAAGGGGACACCCTGGAAGGTCAACATCTCATTTTATGGAAGAGCGACTCTCTGGAGCTAC
TCCTGCTACAATCCAGGTTCTCTCAGTCTGACTCCTACCCTGACCTTCGTACCTATGATTATACGGATGGAAAA
GCTCAGAACTCAGGTGAAACATTTCAACATCACATCACTCACCATTTAACACTGGAAGCCACTTGAACGTGTCC
TTTTGAGGAGGGTGGGACACAACAGTACAGAAATAAGTGCTAATTTCAAAGCTATCATTTTCTATTTTCTAAGA
TAAAGTAAATGAATTCAGGTTAAATGTTCACTTTAAGGTAATAATCAGGAAAGCAACCTTACTACTGAAATGTA
TCTTGGCTGTCAAGAGTATCAAATGCCATGCAGCACTTAAACTTGTGATAAGGAAGATGAAGGTCTTCAGAGAA
GAACCTCTTAAAGGGCCACGGGTGCACCAGGGCTGAGGTCTGATGGGAAGGACTTGACTCCAGGTGCAGAGATG
CACAGGCTCAAGAGAGTAAACCAGGACTGCTGCCCGCACAGCTTCCCTCCCGGGCACTCACCTCGCCATCCCTGC
CGTCCCAAGGCTCTCTCTCAACGATGGTAGGGAAAGCCCCGCTCCTACAGGTGCCGTGGAGCCACGCCCAAAAG
AGAGCTCCCTTAGGGAATAATGACCAAAACACACACACATTTACAATGGACTGCTGGTGCAGAAGAATAAACA
ACTTTAAAAATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 574

MSEFWLISAPGDKENLQALERMNTVTSKSNLSYNTKFAIPDFKVGTLDSLVLGLSDELGKLDTFAESLIRRMAQSV
VEVMEDSKGKVQEHL LANGVDLTSFVTHFEWDMAKYPVKQPLVSVVDIAKQLAQIEMDLKSRTAAYDTLKTNLE
NLEKKSMGNLFTRTLSDIVSKEDFVLDSEYLVTLVIVPKPNYSQWQKTYESLSDMVVPRSTKLITEDKEGGFLT
VTLFRKVIEDFKTKAKENKFTVREFYYDEKEIEREREEMARLLSDKKQYGPLLRLKVNFEAFIAWIIKALR
VFVESVLRVGLPVNFQAVLLQPHKKSSTKRLREVLNSVFRHLDEVAATSILDASVEIPGLQLNNQDYFPYVYFHI
DLSLLD

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FIGURE 575

AGATCTGAATCCAGAGGCTCTCGGAGGAAGAGCTCAGGCCACTGAGGCGGCTCCCAGCTGCGTTGGCGACATGGC
CGACACCCCCAGAGATGCCGGGCTCAAGCAGGCGCCTGCATCACGGAACGAGAAGGCCCGGTGGACTTCGGCTA
CGTGGGGATTGACTCCATCCTGGAGCAGATGCGCCGGAAGGCCATGAAGCAGGGCTTCGAGTTCAACATCATGGT
GGTCGGGCAGAGCGGCTTGGGTAAATCCACCTTAATCAACACCCTCTCAAATCCAAAATCAGCCGGAAGTCGGT
GCAGCCCACCTCAGAGGAGCGCATCCCCAAGACCATCGAGATCAAGTCCATCACGCACGATATTGAGGAGAAAGG
CGTCCGGATGAAGCTGACAGTGATTGACACACCAGGGTTCGGGGACCACATCAACAACGAGAACTGCTGGCAGCC
CATCATGAAGTTCATCAATGACCAGTACGAGAAATACCTGCAGGAGGAGGTCAACATCAACCGCAAGAAGCGCAT
CCCGGACACCCGCGTCCACTGCTGCCTCTACTTCATCCCCGCCACCGGCCACTCCCTCAGGCCCTTGGAGCAGAA
AGTGCCTTTATCTCAGCCATCCGCAGACTGCTCGGCCAGATGCGGGGACAGGCTGGAATGAGGGAGGCGTCTTCA
TCTCCCTGCCATCCCCCTCTCACGCCACCCCCGCCCCCACC GGCTGCAGGTGCTGCTGATGCGCTGGGATCTGA
TTGAGGATAAAAAGGAAGGAGAGATGACCCCTACCCCTCATCCCCAGTTTTGAAAAGGTCTAAGCAAGTGAGT
CTGGTGGAGGAGCTGAGGGAGGGAGCCATGGAAGGTGCCAGAAGGAAGGTTGGCGGGGGCACGTGTGGGCCGTGG
CTTGGGCTGGTCAGAGTGGCGTGAGCTGCCCCGGCGCCTGCCCTGCCCAAGTGACCAGGGAAGTGTGTGTGTGCC
ATGTGTATGCGTGTCCGTCTGTCTGTCTAGTGTCTGGGTTTGGCCCAAGACTGGGCTGTAGTTACATTAATGCCC
AGCCAGCCACCCCTGCCACTCACCCCTCCTGGCCCCAGGCCTTGCTGACTCTCTGAGCTGGGGAGGTGGGAGGCCA
GGCGAGCCTGACTCTGTTGATCTACCCGTGCCTGGGCCCCCTCCCTCAGAGCCCATGGTAACGAACCCCTAGAAA
GGAGAGAACGGGCGTCAGGGGTGCACAGTCCACAGCTGAAGAGCAAGGTTTCGTGGCAGCACGGCCCCGGCCCCCTC
ACCCTCTGTCCCCACGAGGGGACCCATGGGGGCTGTCTTTGCAGGGCACAGATGACCAAAGTCCCTTCCTGCTTC
CTGTTACCTGTCTTGCTCCTGGGGAGAAAGAGGGGCTGATGAGACTCCACTCAGGTGCACACATCACCAGGTGC
ATCTGCAGGCACCGGGCTGGCTGCTTGACGCCAGGAGAAGGTCAGCGAGAAGGAGTGTATGAGTGTGAGTGTGTG
TGCATGGAAGTTGGGGCACTGGGCGTCTGACTCCCTCCCCACCCAAGAGAGGAAGGACCCCTCACCACCCCCACT
GGCGAGACAGTTTACTTTGCCGACTTGCCATGTTTTTGCCAAAACCAAGATTTTGAAGGAAATGAGTGGCCAGCG
CCAGGGCCCAGGCCATGTGGCCTGCCCAGCCTCAATGTCACTTGTTGGTGGCGGGTGGGGTGGGGGTGGGCAGCAGC
ATCCCAGCCTTGAGATGCTTCACTTTCTCTCTGTAAACCAGACTTTGAAAAATTGTTCTGTTTCATCAGGCTCTG
TTCCTCAATGGCCTTTTGCTACGTGCCTCCCGAGAAATTTGTCTTTTGTATAAATGACAAAGTGTTGAAATGT
ATTCCTGAAATAAATGTTTCAAATGC

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FIGURE 576

MADTPRDAGLKQAPASRNEKAPVDFGYVGIDSILEQMRRKAMKQGFEFNIMVVGQSGLGKSTLINTLFKSKISRK
SVQPTSEERIPKTIEIKSITHDIEEKGVRMKLTVIDTPGFGDHINNENCWQPIMKFINDQYEKYLQEEVNINRKK
RIPDTRVHCCLYFIPATGHSLRPLEQKVPLSQPSADCSARCGDRLE

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FIGURE 577

GTTCTTGCCCTGGTGTCTGGTGGTTAGTTTCTGCGACTTGTGTTGGGACTGCTGATAGGAAGATGTCTTCAGGAAAT
GCTAAAAATTGGGCACCCCTGCCCCCACTTCAAAGCCACAGCTGTTATGCCAGATGGTCAGTTTAAAGATATCAGC
CTGTCTGACTACAAAGGAAAATATGTTGTGTTCTTCTTTTACCCCTCTTGACTTCACCTTTGTGTGCCCCACGGAG
ATCATTGCTTTTCAGTGATAGGGCAGAAGAATTTAAGAACTCAACTGCCAAGTGATTGGTGCTTCTGTGGATTCT
CACTTCTGTTCATCTAGCATGGGTCAATACACCTAAGAAACAAGGAGGACTGGGACCCATGAACATTCCCTTTGGTA
TCAGACCCGAAGCGCACCATTTGCTCAGGATTATGGGGTCTTAAAGGCTGATGAAGGCATCTCGTTCAGGGGCCTT
TTTATCATTGATGATAAGGGTATTCTTCGGCAGATCACTGTAAATGACCTCCCTGTTGGCCGCTCTGTGGATGAG
ACTTTGAGACTAGTTCAGGCCTTCCAGTTCACTGACAAACATGGGGAAGTGTGCCCAGCTGGCTGGAAACCTGGC
AGTGATACCATCAAGCCTGATGTCCAAAAGAGCAAAGAATATTTCTCCAAGCAGAAGTGAGCGCTGGGCTGTTTT
AGTGCCAGGCTGCGGTGGGCAGCCATGAGAACAAAACCTCTTCTGTATTTTTTTTTTCCATTAGTAAAACACAAG
ACTTCAGATTCAGCCGAATTGTGGTGTCTTACAAGGCAGGCCTTTCTACAGGGGGTGGAGAGACCAGCCTTTCT
TCCTTTGGTAGGAATGGCCTGAGTTGGCGTTGTGGGCAGGCTACTGGTTTGTATGATGTATTAGTAGAGCAACCC
ATTAATCTTTTGTAGTTTGTATTAACTTGAAC TGAG

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FIGURE 578

MSSGNAKIGHAPAPNFKATAVMPDGQFKDISLSDYKGKYVVFFFYPLDFTFVCPTEIIAFSDRAEEFKKLNCQVIG
ASVDSHFCHLAWVNTPKKQGGLGPMNIPLVSDPKRTIAQDYGVLKADEGISFRGLFIIDDKGILRQITVNDLPVG
RSVDETLRLVQAFQFTDKHGEVCPAGWKPGSDTIKPDVQKSKEYFSKQK

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FIGURE 579

GTCAC TCGTATAAAAAACCTATGCTTTGAAGGTTCTCGTGTGTCTCGGCCTGCAGGTCTCGCTCAGAGCTGTGTCC
CTGAACATCCACCCTGCTGGGGTGGCTTGACGCACTTCTGTGCAAATCTGTTTCGCTCGCAACCCTACCTACCTCT
CTCCCGAACCGGAGAAAAACCTTCGGCGGGGTCCTTCCGGGTTTTGTGTGCAATCTGCGGCGGCGACCCGGCGCCG
CGTCACGCGGTGGTGAATGTGCGGCAGTACGCGCGCCGCGTCTGTTTACGCGGCGATTTCATCATGCTCCGAGCCG
GCGGCGCGCGCCGCTTCCGTCGCCACCTCTCTGGACAGCCAGGGCCGCGAGGCTCATGCCCTCTCCGCGTCCAG
TGCTGCTTAGAGGTGCTCGCGCCGCTCTGCTGCTGCTGCTGCCGCCCGGCTCTTAGCCCGACCTCGCTCCTCC
TCCGCCGGTCCCTCAGCGCGGCCCTCCTGCGCCCCGATCTCCTTGCCCCGCGCCGCTCCCGGAGCAGCATGGACG
GCGCGGGGGCTGAGGAGGTGCTGGCACCTCTGAGGCTAGCAGTGCGCCAGCAGGGAGATCTTGTGCGAAAACCTCA
AAGAAGATAAAGCACCCCAAGTAGACGTAGACAAAGCAGTGGCTGAGCTCAAAGCCCGCAAGAGGGTTCTGGAAG
CAAAGGAGCTGGCGTTACAGCCCAAAGATGATATTGTAGACCGAGCAAAAATGGAAGATACCCTGAAGAGGAGGT
TTTTCTATGATCAAGCTTTTGTATTATGGAGGTGTTAGTGGTCTGTATGACTTTGGGCCAGTTGGCTGTGCTT
TGAAGAACAATATTATTACAGACCTGGAGGCAGCACTTTATCCAAGAGGAACAGATCCTGGAGATCGATTGCACCA
TGCTCACCCCTGAGCCAGTTTTAAAGACCTCTGGCCATGTAGACAAATTTGCTGACTTCATGGTGAAAGACGTAA
AAAATGGAGAATGTTTTCGTGCTGACCATCTATTAAAAGCTCATTTACAGAAATTGATGTCTGATAAGAAGTGTT
CTGTGCGAAAAGAAATCAGAAATGGAAAGTGTTTTGGCCAGCTTGATAACTATGGACAGCAAGAACTTGGCGATC
TTTTTGTGAATAATGTAATAATCTCCATTACTGGAATGATCTATCCCTCCAGTGTCTTTTAACTTAATGT
TCAAGACTTTTCATTGGGCTGGAGGAAACATGCCTGGGTACTTGAGACCAGAACTGCACAGGGGATTTTCTTGA
ATTTCAAACGACTTTTGGAGTTCAACCAAGGAAAGTTGCCTTTTGTGCTGCCAGATTGGAAATTTCTTTAGAA
ATGAGATCTCCCTCGATCTGGACTGATCAGAGTCAGAGAATTCACAATGGCAGAAATTGAGCACTTTGTAGATC
CCAGTGAGAAAGACCACCCCAAGTTCCAGAATGTGGCAGACCTTACCTTTATTTGTATTTCAGCAAAAGCCCAGG
TCAGCGGACAGTCCGCTCGGAAAAATGCGCCTGGGAGATGCTGTTGAACAGGGTGTGATTAATAACACAGTATTAG
GCTATTTTCATTGGCCGCATCTACCTCTACCTCACGAAGGTTGGAATATCTCCAGATAAACTCCGCTTCCGGCAGC
ACATGGAGAATGAGATGGCCCATATGCCTGTGACTGTTGGGATGCAGAATCCAAAACATCCTACGGTTGGATTG
AGATTGTTGGATGTGCTGATCGTTCCTGTTATGACCTCTCCTGTGATGCACGAGCCACCAAAGTCCCACTTGTAG
CTGAGAAACCTCTGAAAGAACCCAAAACAGTCAATGTTGTTTCAGTTTGAACCCAGTAAGGGAGCAATTGGTAAGG
CATATAAGAAGGATGCAAAACTGGTGATGGAGTATCTTGCCATTTGTGATGAGTGCTACATTACAGAAATGGAGA
TGCTGCTGAATGAGAAAGGGGAATTCACAATTGAAACTGAAGGGAAAACATTTTCAGTTAACAAAAGACATGATCA
ATGTGAAGAGATTCCAGAAAACACTATATGTGGAAGAAGTTGTTCCGAATGTAATTGAACCTTCCTTCGGCCTGG
GTAGGATCATGTATACGGTATTTGAACATACATTCCATGTACGAGAAGGAGATGAACAGAGAACATTCTTCAGTT
TCCCTGCTGTAGTTGCTCCATTCAAATGTTCCGTCTCCCACTGAGCCAAAACCAGGAGTTTCATGCCATTTGTCA
AGGAATTATCGGAAGCCCTGACCAGGCATGGAGTATCTCACAAAGTAGACGATTCCTCTGGGTCAATCGGAAGGC
GCTATGCCAGGACTGATGAGATTGGCGTGGCTTTTGGTGTACCAATTGACTTTGACACAGTGAACAAGACCCCCC
ACACTGCAACTCTGAGGGACCGTGACTCAATGCGGCAGATAAGAGCAGAGATCTCTGAGCTGCCCAGCATAGTCC
AAGACCTAGCCAATGGCAACATCACATGGGCTGATGTGGAGGCCAGGTATCCTCTGTTTGAAGGGCAAGAGACTG
GTAAAAAAGAGACAATCGAGGAATGAGGACAATTTTGACAACTTTTGACCACTTGCGCTAATAAAAAAAAAAAAAA
CTACTCTTATGTCCACTTTACAAAAGAAAACAGCATTGTGATTACTCCCAGGGACCGTATTTTATCTTCAGTGGC
TGCTGATTTTACCCCCACAATTAAAGTTGAAGGAATCCTGA

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FIGURE 580

MDGAGAEVLAPLRLAVRQQGDLVRKLKEDKAPQVDVDKAVAEKARKRVLEAKELALQPKDDIVDRAKMEDTLK
RRFFYDQAFAIYGGVSGLYDFGPVGCALKNNIIQTRQHF IQEEQILEIDCTMLTPEPVLKTSGHVDKFADFMVK
DVKNGECEFRADHLLKAHLQKLMSDKKCSVEKKSEMESVLAQLDNYGQQELADLFVNYNVKSPITGNDLSPPVSFN
LMFKTFIGPGGNMPGYLRPETAQGIFLNFKRLLEFNQGKLPFAAAQIGNSFRNEISPRSGLIRVREFTMAEIEHF
VDPSEKDHPKFQNVADLHLYLSAKAQVSGQSARKMRLGDAVEQGVINNTVLGYFIGRIYLYLTKVGISPDKLRF
RQHMENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATKVPLVAEKPLKEPKTVNVVQFEPKSGAI
GKAYKKDAKLVMEYLAICDECYITEMEMLLNEKGEFTIETEGKTFQLTKDMINVKRFQKTLYVEEVVNPVIEPSF
GLGRIMYTVFEHTFHVREGDEQRTFFSFPVAVAPFKCSVLPLSQNQEFMPFVKELSEALTRHGVSHKVDDSSGSI
GRRYARTDEIGVAFGVTIDFDTVNKTPHTATLRDRDSMRQIRAEISELPSIVQDLANGNITWADVEARYPLFEGQ
ETGKKETIEE

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FIGURE 581

GTAGGAGGACCTGAAATTGAGCTGATTGCCATCGCAACAGGAGGGCGGATCGTCCCAGGTTCTCAGAGCTCACA
GCCGAGAAGCTGGGCTTTGCTGGTCTTGTACAGGAGATCTCATTGGGACAACCTAAGGATAAAATGCTGGTCATC
GAGCAGTGTAAGAACTCCAGAGCTGTAACCATTTTATTAGAGGAGGAAATAAGATGATCATTGAGGAGGCGAAA
CGATCCCTTCACGATGCTTTGTGTGTCATCCGGAACCTCATCCGCGATAATCGTGTGGTGTATGGAGGAGGGGCT
GCTGAGATATCCTGTGCCCTGGCAGTTAGCCAAGAGGCGGATAAGTGCCCCACCTTAGAACAGTATGCCATGAGA
GCGTTTGCCGACGCACTGGAGGTCATCCCCATGGCCCTCTCTGAAAACAGTGGCATGAATCCCATCCAGACTATG
ACCGAAGTCCGAGCCAGACAGGTGAAGGAGATGAACCTGCTCTTGGCATCGACTGTTTGCACAAGGGGACAAAT
GATATGAAGCAACAGCATGTCATAGAAACCTTGATTGGCAAAAAGCAACAGATATCTCTTGCAACACAAATGGTT
AGAATGATTTTGAAGATTGATGACATTCGTAAGCCTGGAGAATCTGAAGAATGAAGACATTGAGAAAACCTATGTA
GCAAGATCCACTTCTGTGATTAAGTAAATGGATGTCTCGTGATGCGTCTACAGTTATTTATTGTTACATCCTTTT
CCAGACACTGTAGATGCTATAATAAAAATAGCTGTTTGGTAACCATAGTTTCACTTGTTCAAAGCCGTGTAATCG
TGGGGGTACTATCTCAACTGCTTTTGTATTCAATTGTATTAAAAGAATCTGTTTAAGCAAAAAAAAAAAAAAAAAA
AAAAAA

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FIGURE 582

MLVIEQCKNSRAVTIFIRGGNKMIIEEAKRSLHDALCVIRNLIRDNRVYGGGAAEISCALAVSQEADKCPTLEQ
YAMRAFADALEVIPMALSENSGMNFIQTMTEVRARQVKEMNPALGIDCLHKGTDNDMKQQHVIETLIGKKQQISLA
TQMVRMILKIDDIRKPGESEE

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FIGURE 583

AATTCGGGGGCCGTGGAGTTTGTGACATACGAGGTGACACCCCTCGAGTCACTTCCCTTCAACTCCAGCTGGAGC
GCCTGCTTGGCTTTGGGTTTCGTTCTGTCAGCCTTCGCCCCGCTCCTAGCCTCAGGGCCGGACTCCAGCGCAGAGCC
CAGCCCAGCGCAGCCTGCCAGCAGCCACCCAGCCGCCAGCCGCCAGCCCCGACGAAACCCGGCCAGAGCTTC
CTAGCAGCCCCGAGCCATGAACACCGAAATGTATCAGACCCCCATGGAGGTGGCGGTCTACCAGCTGCACAATTTT
TCCATCTCCTTCTTCTCTCTCTGCTTGGAGGGGATGTGGTTTCCGTTAAGCTGGACAACAGTGCCTCCGGAGCC
AGCGTGGTGGCCATAGACAACAAGATCGAACAGGCCATGGATCTGGTGAAGAATCATCTGATGTATGCTGTGAGA
GAGGAGGTGGAGATCCTGAAGGAGCAGATCCGAGAGCTGGTGGAGAAGAACTCCCAGCTAGAGCGTGAGAACACC
CTGTTGAAGACCCTGGCAAGCCCAGAGCAGCTGGAGAAGTTCCAGTCTGTCTGAGCCCTGAAGAGCCAGCTCCC
GAATCCCCACAAGTGCCCCGAGGCCCTGGTGGTTCTGCGGTGTAAGTGGCTCTGTCTCAGGGTGGGCAGAGCCA
CTAACTTGTTTTACCTAGTTCTTTCCAGTTTGTTTTTGGCTCCCCAAGCATCATCTCACGAGGAGAAGCTTTACA
CCTAGCACAGCTGGTGCCAAGAGATGTCCTAAGGACATGGCCACCTGGGTCCACTCCAGCGACAGACCCCTGACA
AGAGCAGGTCTCTGGAGGCTGAGTTGCATGGGGCCTAGTAACACCAAGCCAGTGAGCCTCTAATGCTACTGCGCC
CTGGGGGCTCCCAGGGCCTGGGCAACTTAGCTGCAACTGGCAAAGGAGAAGGGTAGTTTGAGGTGTGACACCAGT
TTGCTCCAGAAAGTTTAAAGGGGTCTGTTTCTCATCTCCATGGACATCTTCAACAGCTTACCTGACAACGACTGT
TCCTATGAAGAAGCCACTTGTTGTTTTAAGCAGAGGCAACCTCTCTCTCTCTCTGTTTCGTGAAGGCAGGGGAC
ACAGATGGGAGAGATTGAGCCAAGTCAGCCTTCTGTTGGTTAATATGGTATAATGCATGGCTTTGTGCACAGCCC
AGTGTGGGATTACAGCTTTGGGATGACCGCTTACAAAGTTCTGTTTGGTTAGTATTGGCATAGTTTTTCTATATA
GCCATAAATGCGTATATATACCCATAGGGCTAGATCTGTATCTTAGTGTAGCGATGTATACATATACACATCCAC
CTACATGTTGAAGGGCCTAACCAGCCTTGGGAGTATTGACTGGTCCCTTACCTCTTATGGCTAAGTCTTTGACTG
TGTTCAATTTACCAAGTTGACCCAGTTTGTCTTTTAGGTTAAGTAAGAACTCGAGAGTAAAGGCAAGGAGGGGGGC
CAGCCTCTGAATGCGGCCACGGATGCCTTGCTGCTGCAACCCTTTCCCCAGCTGTCCACTGAAACGTGAAGTCCT
GTTTTGAATGCCAAACCCACCATTCACTGGTGCTGACTACATAGAATGGGTTGAGAGAAGATCAGTTTGGGCTTC
ACAGTGTCAATTTGAAAAAGCGTTTTTGTGTTTTGTTTTGAATTATTGTGAAAACTTTCAAGTGAACAGAAGGATGG
TGTCCTACTGTGGATGAGGGATGAACAAGGGGATGGCTTTGATCCAATGGAGCCTGGGAGGTGTGCCAGAAAGC
TTGTCTGTAGCGGGTTTTGTGAGAGTGAACACTTTCCACTTTTTGACACCTTATCCTGATGTATGGTTCCAGGAT
TTGGATTTTGATTTTCCAAATGTAGCTTGAAATTTCAATAAACTTTGCTCTGTTTTTCTAAAAATAAAAA

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FIGURE 584

MNTEMYQTPMEVAVYQLHNFSISFFSSLLGGDVVSVKLDNSASGASVVAIDNKIEQAMD LVKNHLMYAVREEVEI
LKEQIRELVEKNSQLERENTLLKTLASPEQLEKFQSCLSPEEPAPESPQVPEAPGGS AV

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FIGURE 585

GACGTTTCGCGCCAATTTCCGGTTGGCCGGCCACAGTCCACCGCGCGGAGATTCTCAGCTTCCCCAGGAGCAAGAC
CTCTGAGCCCGCCAAGCGCGGCCGACGGCCCTCGGCAGCGATGGCACTGAAGGACTACGCGCTAGAGAAGGAAA
AGGTAAAGAAGTTCTTACAAGAGTTCTACCAGGATGATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCAGT
TGGTTCGGCTGGCTCATCGGGAACAGGTGGCTCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGAGT
TGGTGGACTCAATTTGTGAGAATGCCAGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCCTC
AGTACAAGGAGAGGGAAGTGGTAAATAAAGATGTCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCAGC
GGAGTCGGGACCCTGGGATGGTCCGAAGCCCCCAGAACCAGTACCCTGCTGAACATCATGCGCAGATTTGAGCTGT
ATTTTCAAGGCCCTAGCAGCAGCAAGCCTCGTGTGATCCGGGAAGTGCGGGCTGACTCTGTGGGGAAGTTGGTAA
CTGTGCGTGGAATCGTCACTCGTGTCTCTGAAGTCAAACCCAAGATGGTGGTGGCCACTTACACTTGTGACCAGT
GTGGGGCAGAGACCTACCAGCCGATCCAGTCTCCCACTTTTCATGCCTCTGATCATGTGCCAAGCCAGGAGTGCC
AAACCAACCGCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATTCAGGAGATGAAGA
TGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGCTGGTAGAAGGAGAGAACA
CAAGGATTGCCCAGCCTGGAGACCACGTACGCGTCACTGGTATTTTCTTGCCAATCCTGCGCACTGGGTTCCGAC
AGGTGGTACAGGGTTTACTCTCAGAAACCTACCTGGAAGCCCATCGGATTGTGAAGATGAACAAGAGTGAGGATG
ATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAATTGCAGAGGAGGATTTCTACGAAAAGCTGG
CAGCTTCAATCGCCCCAGAAATATACGGGCATGAAGATGTGAAGAAGGCACTGCTGCTCCTGCTAGTCGGGGGTG
TGGACCAGTCTCCTCGAGGCATGAAAATCCGGGGCAACATCAACATCTGTCTGATGGGGGATCCTGGTGTGGCCA
AGTCTCAGCTCCTGTCTACATTGATCGACTGGCGCCTCGCAGCCAGTACACAACAGGCCGGGGCTCCTCAGGAG
TGGGGCTTACGGCAGCTGTGCTGAGAGACTCCGTGAGTGGAGAAGTACCTTAGAGGGTGGGGCCCTGGTGTGCTG
CTGACCAGGGTGTGTGCTGCATTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGTCA
TGGAGCAGCAGACCATCTCCATTGCCAAGGCCGGCATTCTCACCACACTCAATGCCCGCTGCTCCATCCTGGCTG
CCGCCAACCTGCCTACGGGCGCTACAACCTCGCCGCAGCCTGGAGCAGAACATACAGCTACCTGCTGCCTGCTG
TCTCCCGTTTACCTCCTCTGGCTGATTCAGGACCGGCCCGACCGAGACAATGACCTACGGTTGGCCAGCACA
TCACCTATGTGCACCAGCACAGCCGGCAGCCCCCTCCAGTTTGAACCTCTGGACATGAAGCTCATGAGGCCTT
ACATAGCCATGTGCCGCGAGAAGCAGCCCATGGTGCCAGAGTCTCTGGCTGACTACATCACAGCAGCATACGTGG
AGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACCTTCTGCCCGGACCCTGCTGGCTATCCTGCGCC
TTTCCACTGCTCTGGCACGTCTGAGAATGGTGGATGTGGTGGAGAAAGAAGATGTGAATGAAGCCATCAGGCTAA
TGGAGATGTCAAAGGACTCTCTTCTAGGAGACAAGGGGCAGACAGCTAGGACTCAGAGACCAGCAGATGTGATAT
TTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGTTCTCTGAGGCAGAGCAGCGCTGTGTATCTC
GTGGCTTACACCCGCCAGTTCCAGGCGGCTCTGGATGAATATGAGGAGCTCAATGTCTGGCAGGTCAATGCTT
CCCGGACACGGATCACTTTTGTCTGATTCCAGCCTGCTTGCAACCCTGGGGTCTCTTGTTCCTGCTGGCCTGC
CCCTTGGGAAGGGGCAGTGATGCCTTTGAGGGGAAGGAGGAGCCCTCTTCTCCCATGCTGCACTTACTCCTTT
TGCTAATAAAAGTGTGTGTAGATTGTC

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FIGURE 586

MALKDYALEKEKVKKFLQEFYQDDELGKKQFKYGNQLVRLAHREQVALYVDLDDVAEDDPELVDS ICENARRYAK
LFADAVQELLPOYKEREVVNKDVLVDVYIEHRLMMEQSRDPGMVRSPQNQYPaelmRRFELYFQGPSSSKPRVIR
EVRADSVGKLVTVRGIVTRVSEVKPKMVVATYTCDCQGAETYQPIQSPTFMPLIMCPSQECQTNRSGGRLYLQTR
GSRFIKFQEMKMQEHSQVPVGNIPRSITVLVEGENTRIAQP GDHVSVTGIFLPILRTGFRQVVQGLLSEYLEA
HRIVKMNKSEDDESGAGELTREELRQIAEEDFYEKLAASIAPEIYGHEDVKKALLLLLVGGVDQSPRGMKIRGNI
NICLMGDPGVAKSQLLSYIDRLAPRSQYTTGRGSSGVGLTAAVLRDSVSGELTLEGGALVLADQGVCCIDEFDKM
AEADRTAIHEVMEQQTISIAGILTTLNARCSILAAANPAYGRYNPRRSLEQNIQLPAALLSRFDLLWLIQDRP
DRDNDLRLAQHITYVHQHSRQPPSQFEPLDMKLMRRYIAMCREKQPMVPESLADYITAAYVEMRREAWASKDATY
TSARTLLAILRLSTALARLRMVDVVEKEDVNEAIRLMEMSKDSLLGDKGQTARTQRPADVIFATVRELVS GGRSV
RFSEAEQRCVSRGFTPAQFQAALDEYEELNVWQVNASRTRITFV

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FIGURE 587

CTTTCTGCCCACACTAGACATGGCGCTTGCCAGCGTGTTGGAGAGACCGCTACCGGTGAACCAGCGCGGGTTTTT
CGGACTTGGGGGTCGTGCAGATCTGCTGGATCTAGGTCCAGGGAGTCTCAGTGATGGTCTGAGCCTGGCCGCGCC
AGGCTGGGGTGTCCAGAAAGAGCCAGGAATCGAAATGCTTCATGGAACAACCACCCTGGCCTTCAAGTTCCGCCA
TGGAGTCATAGTTGCAGCTGACTCCAGGGCTACAGCGGGTGCTTACATTGCCTCCCAGACGGTGAAGAAGGTGAT
AGAGATCAACCCATACCTGCTAGGCACCATGGCTGGGGGCGCAGCGGATTGCAGCTTCTGGGAACGGCTGTTGGC
TCGGCAATGTCGAATCTATGAGCTTCGAAATAAGGAACGCATCTCTGTAGCAGCTGCCTCCAAACTGCTTGCCAA
CATGGTGTATCAGTACAAAGGCATGGGGCTGTCCATGGGCACCATGATCTGTGGCTGGGATAAGAGAGGCCCTGG
CCTCTACTACGTGGACAGTGAAGGGAACCGGATTTTCAGGGGGCCACCTTCTCTGTAGGTTCTGGCTCTGTGTATGC
ATATGGGGTCATGGATCGGGGCTATTCCCTATGACCTGGAAGTGGAGCAGGCCTATGATCTGGCCCGTCGAGCCAT
CTACCAAGCCACCTACAGAGATGCCTACTCAGGAGGTGCAGTCAACCTCTACCACGTGCGGGAGGATGGCTGGAT
CCGAGTCTCCAGTGACAAATGTGGCTGATCTACATGAGAAGTATAGTGGCTCTACCCCTTGAAAGAGGGGTGGATGC
AGCTGCTTGTGTTTCTTGGGGTGACTGTCATTGGTAATACGGACACAGTGACCCATCCTCCATCCTATTTATAGT
GGAAGGGCCTTCAATTGTATCAGTACTTTTTTTTAAGCTCTGGCACATTGACCTCTATGTGTTACCAGTCATTAA
TGAGCTGCTGCAGAGGTGACTATTTGTTTTACTTTCTTGATGTTAAACATTACACTACTCACTACTCAATCTCA

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FIGURE 588

MALASVLERPLPVNQRGFFGLGGRADLLDLGPGSLSDGLSLAAPGWGVPEEPGIEMLHGTTTLAFKFRHGVIVAA
DSRATAGAYIASQTVKKVIEINPYLLGTMAGGAADCSFWERLLARQCRIYELRNKERISVAAASKLLANMVYQYK
GMGLSMGTMICGWDKRGPGLYYVDSEGNRISGATFSVGSGSVYAYGVMDRGYSYDLEVEQAYDLARRAIYQATYR
DAYSGGAVNLYHVREDGWIRVSSDNVADLHEKYSGSTP

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FIGURE 589

TCTCTTGATTCCCTAGTCTCTCGATATGGCACCTCCGTCAGTCTTTGCCGAGGTTCCGCAGGCCCCAGCCTGTCCTG
GTCTTCAAGCTCACTGCCGACTTCAGGGAGGATCCGGACCCCCGCAAGGTCAACCTGGGAGTGGGAGCATATCGC
ACGGATGACTGCCATCCCTGGGTTTTGCCAGTAGTGAAGAAAGTGGAGCAGAAGATTGCTAATGACAATAGCCTA
AATCACGAGTATCTGCCAATCCTGGGCCTGGCTGAGTTCCGGAGCTGTGCTTCTCGTCTTGCCCTTGGGGATGAC
AGCCCAGCACTCAAGGAGAAGCGGGTAGGAGGTGTGCAATCTTTGGGGGGAACAGGTGCACCTTCGAATTGGAGCT
GATTTCTTAGCGCGTTGGTACAATGGAACAAACAAGAACACACCTGTCTATGTGTCCTCACCAACCTGGGAG
AATCACAATGCTGTGTTTTCCGCTGCTGGTTTTAAAGACATTCCGGTCCTATCGCTACTGGGATGCAGAGAAGAGA
GGATTGGACCTCCAGGGCTTCCTGAATGATCTGGAGAATGCTCCTGAGTTCTCCATTGTTGCTCCACGCCTGT
GCACACAACCCAACTGGGATTGACCCAACTCCGGAGCAGTGAAGCAGATTGCTTCTGTGTCATGAAGCACCGGTTT
CTGTTCCCCCTTCTTTGACTCAGCCTATCAGGGCTTCGCATCTGGAAACCTGGAGAGAGATGCCTGGGCCATTGCG
TATTTTGTGTCTGAAGGCTTCGAGTTCTTCTGTGCCCAGTCTTCTCCAAGAACTTCGGGCTCTACAATGAGAGA
GTCGGGAATCTGACTGTGGTTGGAAAAGAACCTGAGAGCATCCTGCAAGTCCTTTCCCAGATGGAGAAGATCGTG
CGGATTACTTGGTCCAATCCCCCGCCAGGGAGCACGAATTGTGGCCAGCACCCCTCTCTAACCTTGAGCTCTTT
GAGGAATGGACAGGTAATGTGAAGACAATGGCTGACCGGATTCTGACCATGAGATCTGAACTCAGGGCAGGACTA
GAAGCCCTCAAAACCCCTGGGACCTGGAACCACATCACTGATCAAATTGGCATGTTTCAGCTTCAGTGGGTTGAAC
CCCAAGCAGGTTGAGTATCTGGTCAATGAAAAGCACATCTACCTGCTGCCAAGTGGTCAATCAACGTGAGTGGC
TTAACCACCAAAAATCTAGATTACGTGGCCACCTCCATCCATGAAGCAGTCACCAAAATCCAGTGAAGAAACACC
ACCCGTCCAGTACCACCAAAGTAGTTCTCTGTGTCATGTGTGTTCCCTGCCTGCACAAACCTACATGTACATACCAT
GGATTAGAGACACTTGACAGGACTGAAAGCTGCTCTGGTGAGGCAGCCTCTGTTTAAACCGGCCCCACATGAAGAG
AACATCCCTTGAGACGAATTTGGGAGACTGGGATTAGAGCCTTTGGAGGTCAAAGCAAATTAAGATTTTTATTAA
GAATAAAAGAGTACTTTGATCATGAGACATAGGTATCTTGTCCCTCTCACTAAAAAGGAGTGTGTTGTGTGGCGG
CCACGTGCTTCTATGTGGTGTGTTGACTCTGTACAAATTCTAGTCCCAAAGATCAAGTTGTCTGAAGGAGCCAAAG
TGTGAATGTGGGTGTGGGCTGCGGCATTAAATTCATCATCTCAACCCAGAGTGTCTGGTCTCCCTGCTCTTTCTG
CATGGTTGTGTCCCTAGTCCTAAGCTTTGGTTCTTTAGGGTGACTGTGGTAAGAAGGATATTTAATCATGACATG
CACGGACACGTACATATTTAACTGAAACAAGTTTTACCAAACAGTATTTACTCGTGATGTGCGTAGTGCATTCTG
ATATTTTTGAGCCATTCTATTGTGTTCTACTTCACCTAAAAAATAAAATAAAATGTTGATCAAG

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FIGURE 590

MAPPSVFAEVPQAQPVLVFKLTADFREDPDPRKVN LGVGAYRTDDCHPWVLPVVKKVEQKIANDNSLNHEYLPIL
GLAEFRSCASRLALGDDSPALKEKRVGGVQSLGGTGALRIGADFLARWYNGTNNKNTPVYVSSPTWENHNAVFS
AGFKDIRSYRYWDAEKRGDLQGF LNDLENAPEFSIVVLHACAHNPTGIDPTPEQWKQIASVMKHRFLFPFFDSA
YQGFASGNLERDAWAIRYFVSEGFEFFCAQSFSKNFGLYNERVGNLTVVGKEPESILQVLSQMEKIVRITWSNPP
AQGARIVASTLSNPELFEEWTGNVKT MADRILTMRSELRARLEALKTPGTWNHITDQIGMFSFTGLNPKQVEYLV
NEKHIYLLPSGRINVSGLT TKNLDYVATSIHEAVTKIQ

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FIGURE 591

GAATTCGCTTTGGATCCATTTCCATCGGTCCTTACAGCCGCTCGTCAGACTCCAGCAGCCAAGATGGTGAAGCAG
ATCGAGAGCAAGACTGCTTTTCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCC
ACGTGGTGTGGGCCTTGCAAAATGATCAACCCTTTCTTTCATTCCCTCTCTGAAAAGTATTCCAACGTGATATTC
CTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAATGCACGCCAACATTCCAGTTT
TTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCAATAAGGAAAAGCTTGAAGCCACCATTAAATGAATTA
GTC~~TAA~~TCATGTTTTCTGAAAACATAACCAGCCATTGGCTATTTAAACTTGTATTTTTTTATTTACAAAATATAA
ATATGAAGACATAACCAGTTGCCATCTGCGTGACAATAAACATTATGCTAA

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FIGURE 592

MVKQIESKTAFQEALDAAGDKLVVVDFSATWCGPCKMINPFFHSLSEKYSNVIFLEVDVDDCQDVASECEVKCTP
TFQFFKKGQKVGEFSGANKEKLEATINELV

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FIGURE 593

CTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTCTCCCTCTCAGTAGCACGGAGTCCGAATTAATTGGA
TTTCATTCACTGGGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCAATTGACACTAAGAGCCAGC
GGCTGCAGCTGGGTGCAGAGAGAACCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGCTTGG
GTAAGGCGAGGCGGAATTAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCTGCCC
CGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTGCCC
TTCGCGTCGGAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGGCTG
CTGCTGATGGACTGCCGGCCGACGAGCTATACGAGTCGTCGCACATCGAGTCGGCCATCAACGTGGCCATCCCG
GGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGC GCGCGCTCTTCACGCGCGGCGAGGACCGGGAC
CGCTTACCCGGCGCTGTGGCACCGACACAGTGGTGCTCTACGACGAGAGCAGCAGCGACTGGAACGAGAATACG
GGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTTCTACCTGGAAGGT
GGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGCTCG
CCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCTCGGACATCGAGTCTGACCTT
GACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCTTCCAGTGGAG
ATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATCAAG
TACATCTTGAACGTACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATCCCC
ATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTCATAGATGAAGCCCGGGGC
AAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTTATG
CAGAAGCTCAATCTGTGATGAACGATGCCTATGACATTGTCAAATGAAAAATCCAACATATCCCCTAACTTC
AACTTCATGGGTGAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCAGCA
CAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAGACC
CCACATCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTTCTT
TGTGTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCGGAATTGGTTAA
TACTAACAGAGAGATTTGCTCCATTCTCTTGGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTTGCT
CTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCCAGGCGCATAGGGTAGAACCAAA
TGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGAAGGCTGTTTCTTTTGCATCTGGAAGTACTATATAAT
TGTCTTCAATGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTAGCTCTGTATTTGTGGTAT
CAGTTTGGAAAAAAAATCTGATACTCCATTTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTGTTTG
TTTGAATTGTGTTTGTCTTTTCTTTGATGGGCTTAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGCCACT
TCTTAAACAGAACAAAACAAAAAAGAAAAATTGTGCTCTTTTCTAATCCAAAGGGTATATTTGCAGCATGCTTG
ACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTATGGCGAAGTCTTTAGTCTT
TTTCATGTATTTTCTCATGATTTTTTCTCTTTATGTAGTTTGACTATGCCTTACCTTTGTAAATATTTTTGCTT
GTGTTGTCGCAAAGGGGATAATCTGGGAAAGACACCAAATCATGGGCTCACTTTAAAAAAGAAAGAATAAAAAA
ACCTTCAGCTGTGCTAAACAGTATATTACCTCTGTATAAAATCTTCAGGGAGTGTCACCTCAAATGCAATACTT
TGGGTTGGTTTCTTTCTTTAAAAAATTTGTATAAAACTGGAAGTGTGTGTGTGTGAGCATGGGTACCCATTG
ATAAGAGAAATGCATTTGATTGTGAAGAAGGAGAGTTAAATTCCTCATTATGTTTCGTGGTGTAAAGTTTAGAGC
TGGAAATTTATTATAAGAATGTAAACCTTAAATTATTAATAAATACTATTTTGGCTATTGAAAAAAAAAAAAA
AAAAAAAAA

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FIGURE 594

MIDTLRPVPPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESLLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN
LDGSCSSSSPPLPVLGLGGLRISSDSSSDIESDLDRDPNSATDSGSPLSNSQPSFPVEILPFLYLGCARDSTNL
DVLEEFGIKYILNVTPLNLPNLFENAGEFKYKQIPISDHWSQNLQFFPEAISFIDEARGKNCGLVHCLAGISRS
VTVTVAYLMQKLNLSMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV
DSLQST

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FIGURE 595

CCAGCCTCGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCCTCTCAGTAGCACGGAGTCCGAATTAA
TTGGATTTTCACTTCACTGAGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCACTGACACTAAGAG
CCAGCGCTGCAGCTGGTGCAGAGAGAACCTCCGGCTTTGACTTCTGTCTCGTCTGCCCCAAGGCCGCTAGCCTCG
GCTTGGGAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGCACGTTTCGCGCGCGGTGCGTGGGCCATTGCGCTG
CCCCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTG
CCCTTCGCGTCGGAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGG
CTGCTGCTGATGGACTGCCGGCCGAGGAGCTATACGAGTCGTGCGACATCGAGTCGGCCATCAACGTGGCCATC
CCGGGCATCATGCTGCGGCGCCTGCAGAAAGGGTAACCTGCCGGTGCAGCGCGCTCTTACGCGCGGCGAGGACCGG
GACCGCTTCACCCGGCGCTGTGGCACCGACACAGTGGTGTCTACGACGAGAGCAGCAGCGACTGGAACGAGAAT
ACGGGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAA
GGTGGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGC
TCGCCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCTCGGACATCGAGTCTGAC
CTTGACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCTTCCCAGTG
GAGATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATC
AAGTACATCTTGAACGTCACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATC
CCCATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTTATAGATGAAGCCCGG
GGCAAGAAGCTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTT
ATGCAGAAGCTCAATCTGTGATGAACGATGCCTATGACATTGTCAAATGAAAAAATCCAACATATCCCCTAAC
TTCAACTTCATGGGTGAGCTGTGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCCA
GCACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAAG
ACCCACACCCCTCCTTGCTGGAATGTGTCTGGCCCTTACGAGTTTTCTCTTGGCAGCATCAGCTGGGCTGCTTT
CTTTGTGTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCAGGAATTGGT
TAATACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTT
GCTCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCAGGCGCATAGGGTAGAACC
AAATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCTTTTGCATCTGGAAGTACTATAT
AATTGTCTTCAAGTGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTAGCTCTGTATTTGTG
GTATCAGTGTGGAAAAGAGAAATCTGATACTCCATTTGGATTATTGTAAATATTTGATCTTGAATCACTTGACA
GTGTTTGTGTTGAATTGTGTTTGTGTTTTTCTTTGATGGGCTTAAAAGAAATTATCCAAAGGGAGAAAAGAGCAGTA
TGCCACTTCTTAAAACAGAACAAAACAAAAAAGAAAATTGTGCTCTGTTGTAATCCAAAGGGGAGATTTCAGC
ATGCTTGACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTATGGCGAAGTCTT
TAGTCTTTTTTATGATATTTTCTCATGATTTTTTCTCTTTATGTAGTTTGAGTATGCCTTACCTTTGTAAATATT
TTTGCTTGTGTTGTGCAAGGGGATAATCTGGGAAAGACACCAATCATGGGCTCACTTTAAAA

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FIGURE 596

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESLLGLLLKKLKDEGCRAFYLEDEARGKNCGVLVHCLAG
ISRSVTVTVAYLMQKLNLNMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQN
VYQVDSLQST

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FIGURE 597

GCTGAGTCCAAGAGATAGCAAATCGAGTCTTAAATAATCCGGGGAGAAAGACGCCCGGGTAGATTGAGGTGCAG
CCTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCTCTCAGTAGCACGGAGTCCGAATTAATTGG
ATTTCAATTCAGTGGGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTGACACTAAGAGCCAG
CGGCTGCAGCTGGGTGCAGAGAGAACCCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGCTTG
GGTAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCTGCC
CCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTGCC
CTTCGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGGCT
GCTGCTGATGGACTGCCGGCCGAGGAGCTATACGAGTCGTGCGACATCGAGTCGGCCATCAACGTGGCCATCCC
GGGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGCAGCGCGCTCTTACGCGCGGCGAGGACCGGGA
CCGCTTACCCGGCGCTGTGGCACCAGACACAGTGGTGTCTTACGACGAGAGCAGCAGCGACTGGAACGAGAATAC
GGGCGGCGAGTCGGTGTCTCGGGCTGTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAAGG
TGGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGCTC
GCCGCCGTTGCCAGTGTCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCTCGGACATCGAGTCTGACCT
TGACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCCCTCCAGTGGA
GATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATCAA
GTACATCTTGAACGTCACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATCCC
CATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTTCATAGATGAAGCCGGGG
CAAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTTAT
GCAGAAGCTCAATCTGTGATGAACGATGCCTATGACATTGTCAAATGAAAAATCCAACATATCCCCTAACTT
CAACTTCATGGGTGAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCCAGC
ACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAGAC
CCCACACCCCTCCTTGGCTGGAATGTGTCTGGCCCTTACAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTTCT
TTGTGTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCGGAATTGGTTA
ATACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTTGC
TCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCCAGGCGCATAGGGTAGAACC
ATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAAGCTGTTTCTTTTGCATCTGGAAGTACTATATAA
TTGTCTTCAATGAAGACTAATTCAATTTGTCATATAGAGGAGCCAAAGAGAGATTTGAGCTCTGTATTTGTGGTA
TCAGTTTGGAAAAAATCTGATACTCCATTTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTGTG
TTTGAATTGTGTTTGTGTTTTTCTTTGATGGGCTTAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGCCACT
TCTTAAACAGAACAAAACAAAAA

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FIGURE 598

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESVLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN
LDGSCSSSSPPLPVLGGLGGLRISSDSSSDIESDLDRDPNSATDSGSPLSNSQPSFPVEILPFLYLGCARDSTNL
DVLEEFGIKYILNVTPNLPNLFENAGEFKYKQIPISDHWSQNLSQFFPEAISFIDEARGKNCVILVHCLAGISRS
VTVTVAYLMQKLNLNMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV
DSLQST

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FIGURE 599

CCGGCGGCGCCTCAGGTCGCGGGGCGCCTAGGCCTGGGTTGTCCCTTGCATCTGCACGTGTTTCGCAGTCGTTTCC
GCG**ATG**CTGCCCTCTGCTGCGCTGCGTGCCCCGTGTGCTGGGCTCCTCCGTCGCCGGCCTCCGCGCTGCCGCGCCC
GCCTCGCCTTTCCGGCAGCTCCTGCAGCCGGCACCCCGGCTGTGCACCCGGCCCTTCGGGCTGCTCAGCGTGCGC
GCAGGTTCCGAGCGGCGGCGGGCCTCCTGCGGCCTCGCGGACCTGCGCCTGTGGCTGTGGCTGCGGCTCGCTG
CACACCGACGGAGACAAAGCTTTTGTGATTTCCTGAGTGATGAAATTAAGGAGGAAAGAAAAATTCAGAAGCAT
AAAACCCCTCCCTAAGATGTCTGGAGGTTGGGAGCTGGAATGAATGGGACAGAAGCGAAATTAGTGCGGAAAGTT
GCCGGGGAAAAATCACGGTCACTTTCAACATTAAACAACAGCATCCCAACCAATTTGATGGTGAGGAGGAACCC
TCGCAAGGGCAGAAGGTTGAAGAACAGGAGCCTGAACTGACATCAACTCCCAATTTCTGGTTGAAGTTATAAAG
AATGATGATGGCAAGAAGGCCCTTGTGTTGGACTGTCATTATCCAGAGGATGAGGTTGGACAAGAAGACGAGGCT
GAGAGTGACATCTTCTCTATCAGGGAAGTTAGCTTTTCAGTCCACTGGCGAGTCTGAATGGAAGGATACTAATTAT
ACACTCAACACAGATTCCTTGGACTGGGCCTTATATGACCACCTAATGGATTTCCTTGCCGACCGAGGGGTGGAC
AACACTTTTGCAGATGAGCTGGTGGAGCTCAGCACAGCCCTGGAGCACCAGGAGTACATTACTTTTCTTGAAGAC
CTCAAGAGTTTTGTCAAGAGCCAG**TAG**AGCAGACAGATGCTGAAAGCCATAGTTTCATGGCAGGCTTTGGCCAGT
GAACAAATCCTACTCTGAAGCTAGACATGTGCTTTGAAATGATTATCATCCTAATATCATGGGGGAAAAATACC
AAATTTAAATTATATGTTTTGTGTTCTCATTATATTATCATTTTTTTCTGTACAAATCTATTATTTCTAGATTTTT
GTATAACATGATAGACATAAAATTGGTTTATCTCCTCCGCTGAGTCTTCCTAGAAGTACCTGCTGGGTTCTCAGT
TCCAGTTCCCATCCTTTGATTGATCACTCTCCCTGACATCCACCTGTATGACTTTGTACCAAATGCTGTCTTCT
CTTTCTCCAATCAAGAAATAATAATCCCTCGAGTTTACAAAACAAAAA

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FIGURE 600

MLPILLRCVPRVLGSSVAGLRAAAPASPFRLQLQPAPRLCTRPFGLLSVRAGSERRPGLLRPRGPCACGCGCGLH
TDGDKAFVDFLSDEIKEERKIQKHKTLPKMSGGWELEINGTEAKLVRKVAGEKITVTFNINNSIPPTFDGEEEPS
QGQKVEEQEPILTSTPNFVVEVIKNDDGKKALVLDCHYPEDEVGQEDAESEDFSIREVSFQSTGESEWKDTNYT
LNTDSLWDALYDHLMDFLADRGVDNTFADELVELSTALEHQEYITFLEDLKSFVKSQ

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FIGURE 601

GTAACCGCTACTCCCGGACACCAGACCACCGCCTTCCGTACACAGGGGCCCGCATCCCACCCTCCCGGACCTAAG
AGCCTGGGTCCCCTGTTTCCGGAGGTCCGCTTCCCGGCCCCAGATTCTGGCATCCCAGCCCTCAGTGTCCAAGA
CCCAGGCAGCCCGGGTCCCCGCCTCCCGGATCCAGGCGTCCGGGATCTGCGCCACCAGAACCTAGCCTCCTGCAG
ACCTCCGCCATCTGGGGGCACTCAACCTCCTGGAGCCAAGGGCCCCACGTCCCACCCAGAGAACTCTCGTATTCT
CCAGCTCCTAGGGCCAAGGAACCCGGGCGCTCCGAACCTCCAGCTTTCGGACATCTGGCACACGGGGCAGAGCAG
AGAAGCTCAGCGCCAGCCTGGGGAATTTAAACACTCCAGCTTCCAAGAGCCAAGGAACCTCAGTGTGTGAACT
CACAACTCTAAGGAGCCCTCCAAAGTTCCAGTCTCCAGGTGCTGTTACTCAACTCAGTCTTAGGAACGTGGGGTC
CTGGGAAGGAGCCCAAGCGCTCCCAGCCAGCTTCCAGGCGCTAAGAAACCCCGGTGCTTCCCATCATGGTGGCCG
ATCCTCCTCGAGACTCCAAGGGGCTCGCAGCGGCGGAGCCACCGCCAACGGGGGCGCTGGCGCTGGCCTCCATCG
AGGACCAAGGCGCGCAGCAGGCGGCTACTGCGGTTCCTGGGACCAGGTGCGCCGCTGCCTTCGAGCCAACTGCG
TTGTGCTGCTGACAGTGGTGGCCGTGGTGGCCGGCGTGGCGCTGGGACTGGGGGTGTCGGGGGGCCGGGGGTGCGC
TGGCGTTGGGGCCCGAGCGCTTGAGCGCCTTCGTCTTCCCGGGCGAGCTGCTGCTGCGTCTGCTGCGGATGATCA
TCTTGCCGCTGGTGGTGTGACGCTTGATCGGCGGCGCCGCGCAGCCTGGACCCCGGCGCGCTCGGCCGTCTGGGCG
CCTGGGCGCTGCTCTTTTTCTGGTACCCACGCTGCTGGCGTCGGCGCTCGGAGTGGGCTTGGCGCTGGCTCTGC
AGCCGGGCGCGCCTCCGCCGCCATCAACGCCCTCCGTGGGAGCCGCGGGCAGTGCCGAAAATGCCCCAGCAAGG
AGGTGCTCGATTCTGTTCTGGATCTTGCGAGAAATATCTTCCCTTCCAACCTGGTGTGACGAGCCTTTCGCTCAT
ACTCTACCACCTATGAAGAGAGGAATATCACCGGAACCAGGGTGAAGGTGCCCGTGGGGCAGGAGGTGGAGGGGA
TGAACATCCTGGGCTTGGTAGTGTTTGCCATCGTCTTTGGTGTGGCGCTGCGGAAGCTGGGGCCTGAAGGGGAGC
TGCTTATCCGCTTCTTCAACTCCTTCAATGAGGCCACCATGGTTCTGGTCTCCTGGATCATGTGGTACGCCCTG
TGGGCATCATGTTCTGGTGGCTGGCAAGATCGTGGAGATGGAGGATGTGGGTTTACTCTTTGCCCGCCTTGGCA
AGTACATTCTGTGCTGCTGCTGGGTACGCCATCCATGGGCTCCTGGTACTGCCCCCTCATCTACTTCTCTTCA
CCCGCAAAAACCCCTACCGCTTCTGTGGGGCATCGTGACCGCGCTGGCCACTGCCTTTGGGACCTCTTCCAGTT
CCGCCACGCTGCCGCTGATGATGAAGTGCCTGGAGGAGAATAATGGCGTGGCCAAGCACATCAGCCGTTTCATCC
TGCCCATCGGCGCCACCGTCAACATGGACGGTGCCGCGCTCTTCCAGTGCCTGGCCGAGTGTTTATTGCACAGC
TCAGCCAGCAGTCCTTGGACTTCGTAAAGATCATCACCATCCTGGTCACGGCCACAGCGTCCAGCGTGGGGGCAG
CGGGCATCCCTGCTGGAGGTGTCTCACTCTGGCCATCATCCTCGAAGCAGTCAACCTCCCGGTGACCATATCT
CCTTGATCCTGGCTGTGGACTGGCTAGTCGACCGGTCTGTACCGTCTCAATGTAGAAGGTGACGCTCTGGGGG
CAGGACTCCTCCAAAATTATGTGGACCGTACGGAGTCGAGAAGCACAGAGCCTGAGTTGATACAAGTGAAGAGTG
AGCTGCCCTGGATCCGCTGCCAGTCCCCACTGAGGAAGGAACCCCTCCTCAAACACTATCGGGGGCCCGCAG
GGGATGCCACGGTCGCCTCTGAGAAGGAATCAGTCATGTAAACCCCGGGAGGGACCTTCCCTGCCCTGCTGGGGG
TGCTCTTTGGACACTGGATTATGAGGAATGGATAAAATGGATGAGCTAGGGCTCTGGGGGTCTGCCTGCACACTCT
GGGGAGCCAGGGGCCCCAGCACCTCCAGGACAGGAGATCTGGGATGCCTGGCTGCTGGAGTACATGTGTTTACA
AGGGTTACTCCTCAAACCCCCAGTTCTCACTCATGTCCCCAACTCAAGGCTAGAAAACAGCAAGATGGAGAAAT
AATGTTCTGCTGCGTCCCCACCGTGACCTGCCTGGCCTCCCCGTCTCAGGGAGCAGGTACAGGTCACCATGGG
GAATTCTAGCCCCCACTGGGGGGATGTTACAACACCATGCTGGTTATTTTGGCGGCTGTAGTTGTGGGGGATGT
GTGTGTGCACGT
CCACCCTGTCCCCAGATCCCCTATTCCCTCCACAATAACAGAAACACTCCCAGGGACTCTGGGGAGAGGCTGAGG
ACAAATACCTGCTGTCACTCCAGAGGACATTTTTTTTTTAGCAATAAAATTGAGTGTCAACTATTTAAAAA
AAAAAA

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FIGURE 602

MVADPPRDSKGLAAAEPTANGGLALASIEDQGAAAGGYCGSRDQVRRCLRANLLVLLTVVAVVAGVALGLGVSGA
GGALALGPERLSAFVFPGELELLRLLRMIILPLVVCSLIGGAASLDPGALGRLGAWALLFFLVTTLLASALGVGLA
LALQPGAASAAINASVGAAGSAENAPSKEVLDSFLDLARNIFPSNLVSAAFRSYSTTYEERNITGTRVKVPVGQE
VEGMNILGLVVFAIVFGVALRKLGPGELELLIRFFNSFNEATMVLVSWIMWYAPVGIMFLVAGKIVEMEDVGLLFA
RLGKYILCCLLGHAIHGLLVLPLIYFLFTRKNPYRFLWGIVTPLATAFGTSSSSATLPLMMKCVEENNGVAKHIS
RFILPIGATVNMDGAALFQCVAAVFIAQLSQQSLDFVKIITILVTATASSVGAAGIPAGGVLTLLAIILEAVNLPV
DHISLILAVDWLVDRSCTVLNVEGDALGAGLLQNYVDRTESRSTEPELIQVKSELPDPLPVPTEEGNPLLKHVR
GPAGDATVASEKESVM

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FIGURE 603

GGGATTTTTAAAAAATCAAAATACAAATCCAACTTTTTGAGTTTTTCGTTGTCATTGCTCTTATCTTTCCTGAGTC
ACTTCCCATTTTCCAAACTCAGCAACCCAGTTTGCGAGTCTGGTTTCATGAACCTTTGTAAGGTGTTTGGTGCG
GTCACRGTGTATACTTGCCGTGTAGTATTTGACTCAGCGCATCTGCCTTGAGTCATTTTACC GCGGCCATTTAC
TACTGCCGTTGAGCCCTGTCCACGCCTTGGGAGTGTGATATGTTGAGAGTTTTCTGCTGGCTGRGGAGGGATC
ATTTAGTTTTTGCGGACGTATGTTGCACTGAGGATTTAGGGAGAGAGCAAGATTTCTGTTGAGGAGGTTT CAGAAG
TATAAGGAATCGGGAGAGTAGATAGGAGTGAAGCATTTGGCAGCGTAAAGAAGCTTGGCTTAGCTTTAATGGATT
AGGGAGAGATTGCTATCTAGCATTATTACATGTTATTGTTCTCTTTGCTATTTTATACACCTAGAACAACTTTTC
CCTCGGGGTTAACAAACATCTTCAACTCTGTTTTCTGTATGGCTCCTGACTCTTACCTTTGTTTTAGGAGGCTTC
CCTCTTCAGAGGAACTGGGAGAAGCCAATTTCCACTGCTTCTTTTTCTGTGCTTTTTTAACACTCAAACCCAG
AACACTTAATCCCTCTGCAGCTCGTGCAAAAATTCAGTCTGTAATTTAAAATGTGTGCACGGTACACTGCTGACCA
TGGGCATGTCTATTGTTTGTATCTGTAATGTGTATGTCCATTTAGTGTGTCTGTTTTAGTATGCAGGTGATAG
ACTAGAGAACAAGACCTCTGCTCCGTAGCATCCTGGAGCAGTCTGAATGCCAGAAATGGATAACCGTTTTGCTAC
AGCATTTGTAATTGCTTGTGTGCTTAGCCTCATTTCCACCATCTACATGGCAGCCTCCATTGGCACAGACTTCTG
GTATGAATATCGAAGTCCAGTTCAAGAAAATTCAGTGAATTTGAATAAAAGCATCTGGGATGAATTCATTAGTGA
TGAGGCAGATGAAAAGACTTATAATGATGCACTTTTTCGATACAATGGCACAGTGGGATTGTGGAGACGGTGTAT
CACCATACCCCAAAACATGCATTGGTATAGCCCACCAGAAAGGACAGAGTCATTTGATGTGGTCACAAAATGTGT
GAGTTTCACACTAACTGAGCAGTTCATGGAGAAATTTGTTGATCCCGAAACCACAATAGCGGGATTGATCTCCT
TAGGACCTATCTTTGGCGTTGCCAGTTCCTTTTACCTTTTGTGAGTTTAGGTTTGATGTGCTTTGGGGCTTTGAT
CGGACTTTGTGCTTGCATTTGCCGAAGCTTATATCCCACCATTGCCACGGGCATTCTCCATCTCCTTGCAGGTCT
GTGTACACTGGGCTCAGTAAGTTGTTATGTTGCTGGAATTGAACTACTCCACCAGAACTAGAGCTCCCTGACAA
TGTATCCGGTGAATTTGGATGGTCCTTCTGCCTGGCTTGTGTCTCTGCTCCCTTACAGTTTCATGGCTTCTGCTCT
CTTCATCTGGGCTGCTCACACCAACCGGAAAGAGTACACCTTAATGAAGGCATATCGTGTGGCATGAGCAAGAAA
CTGCCTGCTTTACAATTGCCATTTTTATTTTTTTAAAATAATACTGATATTTTCCCCACCTCTCAATTGTTTTTA
ATTTTTATTTGTGGATATACCATTTTATTATGAAAATCTATTTTATTTATACACATTCCACCTAAATACACACT
TAATACCACTAAAATTTATGTGGTTTACTTTAAGCGATGCCATCTTTCAAATAAACTAATCTAGGTCTAGACAGA
AAGAAATGGATAGAGACTTGACACAAATTTATGAAAGAAAATTTGGGAGTAGGAATGTGACCGAAAACAAGTTGTG
CTAATGTCTGTAGACTTTTTCAGTAAAACTAAAGTAACTGTATCTGTTCAACTAAAAACTCTATATTAGTTTCTT
TGGGAAACCTCTCATCGTCAAAACTTTATGTTCACTTTGCTGTTGTAGATAGCCAGTCAACCAGCAGTATTAGTG
CTGTTTTCAAAGATTTAAGCTCTATAAAATTTGGGAAATTTATCTAAGATCATTTTCCCTAAGCATTGACACATAGC
TTCATCTGAGGTGAGATATGGCAGCTGTTTGTATCTGCACGTGTCTGTCTACAAAAAGTGAAAAATACAGTGTT
TACTTGAAATTTTAACTTTGTAAGTGAAGAAATTCAGTTTCAGCCGGGCGAGGATTAGTATTATTTTAACTCTC
CGTAAGATTTTTCAGTACCACCAAATTTGTTTTGGATTTTTTTTTCTTCTCTTCACATACCAGGGTTATTTAAAGT
GTGCTTTCTTTTTACATTATATTACAGTTACAAGGTAAAATTCCTCAACTGCTATTTATTTATTCAGCCCAGTA
CTATAAAGAACGTTTTCACCATAATGACCTCCAGAGCTGGGAAACCTACCACAAGATCTAAAGTTCTGGCTGTCC
ATTAACCTCCAACATATGGTCTTTATTTCTTGTGGTAATATGATGTGCCTTTCTTGCCTAAATCCCTTCCTGGTG
TGTATCAACATTATTTAATGTCTTCTAATTCAGTCATTTTTTATAAGTATGTCTATAAACATTGAACTTTAAAA
AACTTATTTATTTATTCCTACTGTAGCAATTGACAGATTAATAAATGTAACCTTCATAATTTCTTACCATAAC
CTCAATGTCTTTTTTAAAAAATAAAATTAATAAATGAAAAGAGAAA

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FIGURE 604

MDNRFATAFVIACVLSLISTIYMAASIGTDFWYEYRSPVQENSSDLNKS IWDEFISDEADEKTYNDALFRYNGTV
GLWRRCTITIPKNMHWYSPPERTESFDVVTKCVSFTLTEQFMEKFVDPGNHNSGIDLLR TYLWRCQFLLPFVSLGL
MCFGALIGLCACICRSLYPTIATGILHLLAGLCTLGSVSCYVAGIELLHQLELPDNVSGEFGWSFCLACVSAPL
QFMASALFIWAAHTNRKEYTLMKAYRVA

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FIGURE 605

GGCACGAGGCTGCTGTTTGTCTACTTCCTCCTGCTTCCCCGCCGCCGCCGCCGCCATC**ATC**AGGGGAAATCGTGCA
CTTGCAGGCCCGGCAGTGCGGCAACCAAATCGGCGCCAAGTTTTGGGAGGTGATCAGCGATGAGCACGGCATCGA
CCCCACGGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAACGCATCAACGTGTACTACAATGAGGCCACCGG
CGGCAAGTACGTGCCCCGCGCCGTGCTCGTGGATCTGGAGCCCGGCACCATGGACTCCGTGCGCTCGGGGGCCCTT
CGGGCAGATCTTCCGGCCGGACAACCTTCGTTTTCCGGTCAGAGTGGTGCTGGGAACAACCTGGGGCCAAGGGGCACTA
CACAGAAGGCGCGGAGCTGGTGGACTCGGTGCTGGATGTTGTGAGAAAGGAGGCTGAGAGCTGTGACTGCCTGCA
GGGTTTCCAGCTGACCCACTCCCTGGGTGGGGGGACTGGGTCTGGGATGGGTACCCCTCCTCATCAGCAAGATCCG
GGAGGAGTACCCAGACAGGATCATGAACACGTTTAGTGTGGTGCCTTCGCCCAAAGTGTGAGACACAGTGGTGGA
GCCCTACAACGCCACCCCTCTCAGTCCACCAGCTCGTAGAAAACACAGACGAGACCTACTGCATTGATAACGAAGC
TCTCTACGACATTTGCTTCAGAACCCCTAAAGCTGACCACGCCCACCTATGGTGACCTGAACCACCTGGTGTCTGC
TACCATGAGTGGGGTACCACCTGCCTGCGCTTCCCAGGCCAGCTCAATGCTGACCTGCGGAAGCTGGCTGTGAA
CATGGTCCCCTTTCCCCGGCTGCACTTCTTCATGCCCGGCTTTGCCCCACTGACCAGCCGGGGCAGCCAGCAGTA
CCGGGCGCTGACCGTGCCCGAGCTCACCCAGCAGATGTTTGATGCCAAGAACATGATGGCTGCCTGCGACCCCCG
CCATGGCCGCTACCTGACGGTTGCCGCCGTGTTCAGGGGCCGCGATGTCCATGAAGGAGGTGGATGAGCAAATGCT
TAATGTCCAAAACAAAACAGCAGCTATTTTGTGAGTGGATCCCCAACAAATGTGAAAACGGCTGTCTGTGACAT
CCCACCTCGGGGGCTAAAAATGTCCGCCACCTTCATTGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCAT
CTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGACGAGAT
GGAGTTCACCGAGGCCGAGAGCAACATGAATGACCTGGTGTCCGAGTACCAGCAGTACCAGGATGCCACAGCCGA
GGAGGAGGGCGAGTTCGAGGAGGAGGCTGAGGAGGAGGTGGCC**TAG**AGCCTTCAGTCACTGGGGAAAGCAGGGAA
GCAGTGTGAACCTTTATTCACTCCAGCCTGTCTGTGGCCTGTCCCACTGTGTGCACTTGCTGTTTTCCCTGT
CCACATCCATGCTGTACAGACACCACCATTAAAGCATTTTCATAGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 606

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGKYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEFEEEEEEVA

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FIGURE 607

CTATCAATCTCCAGAGCTTTTTCTTTTAAAGTGTGAGCGAGTTTATTAGAGAAGTAAAGAGACCCAAGAGTGCCT
ACTCCATAGACAGAGCAGCCACTGTGACACTGTACCCATTAAACACTAACTCTCCATTGCCCCCTCCAGCAACCCC
TAGCACCCACTGTCTACTTTCTGTCTCTATGTGGTTGTCTATTTGAGGGACATCACATAAGTGGAGTCATATATT
TGTCCTTTCATGTCTCCCTTATTTTCAATTTAGCATAACGTTTTCAAGGGTTTCTGTGTTGTGAATATATCAGAAT
TTCATTCTCTTTTTAAGGTAGAATCATATCATTTTTAAACATTTTCAAGTTGGACCATCTAAGTTCAGTCCTTCATT
TTCAACAATTAACCAACAGCCCTCAACCGGGTGCATCTCACGTTAGCTAGAGACAGAAGTGGAGCTAGAAGTCAG
ATCTCTTACCAAAAGTTGCCCTTCTTCTCTGTGGGTAAAGTGGGGCACCCTTGGGACGCTGTGCTGGGCGTACATG
GGTGCTTGATGAAGTTACTTGGTGGACTGATGTGATTGATGTCCAACATGTATGCAGGGACAGAGGCTATGGTCC
CTACAGAGCAGGCATGGAGAGAAGGAGAAATACATACGGGCAGGAGCCAGGAGAGGGAGGGTGTAGTGAGCAGAG
ACCGCGCCACTGCACTCCAGCCTGAGTGACAGAGTGAGAATCCATCTAAAAAATTGCTTACTAAAGAAGTGGTCT
CCTGAGGTCTTAAGACGTTCCCTGGCAATGTCTTGAGTGGGTGGGAGAGAGCCTCCAGTCATTGAGCTGTGGAATT
TCAGAGGTGAGAACCACACCTAACCCCAATTACTTTCCCTGTTTGCCTCAGTGACACAGCTGCAGGAACCCCTG
GTGGGTGTTGTATTAAGTAAATTTGACCTTTATTCTTTGCAGATCTGTGAAATGTTGTCTTCTGAGGGGCCACGT
GTATCTGTAGTGCTGAGGACTCCTTGGGGCCTCTGAAGTCACAGAGAGAACCTGCAGGGTGGGGGACCAGTGTGT
GACAGCCCTGCTTTGCATTTTCTTTGAGAAGTGCTGTCAATTTGCATTTCTCTCCACCAGGGGAATCTTCAATCT
TGAGAGGTGTGATCATAACTTGCCTTGTTTCTTGTCGCTACAGAGAACGGAAGGCTCCCTTGATGGAACCTTAGAC
AGCAAGGCCAGATGCACATCCCTGGAAGGACATCCATGTTCCGAGAAGAACAGATGATCCCTGTATTTCAAGACC
TCTGTGCACTTATTTATGAACCTGCCCTGCTCCACAGAACACAGCAATTCCTCAGGCTAAGCTGCCGGTTCTTA
AATCCATCCTGCTAAGTTAATGTTGGGTAGAAAGAGATACAGAGGGGCTGTTGAATTTCCACATACCCTCCTTC
CACCAAGTTGGAACATCCTTGGAATTTGGGAAGAGCACAAAGAGGAGATCCAGGGCAAGGCCATTGGGATATTCTG
AAACTTGAAATATTTTGTGTTTGTGTCAGAGATAAAGACCTTTTCCATGCACCCTCATACACAGAAACCAATTTTCTT
TTTTATACTCAATCATTTCTAGCGCATGGCCTGGTTAGAGGCTGGTTTTTCTCTTTTCTTTGGTCTTCAAAG
GCTTGTAGTTTTGGGTAGTCCTTGTTCTTTGGAAATACACAGTGCTGACCAGACAGCCTCCCCCTGTCCCCTCTA
TGACCTCGCCCTCCACAAATGGGAAAACCAGACTACTTGGGAGCACCGCCTGTGAAATACCAACCTGAAGACACG
GTTTATTGAGGCAACGCACAAAACAGAAAATGAAGGTGGAACAAGCACATATGTTCTTCAACTGTTTTTGTCTAC
ACTCTTTCTCTTTTCTCTACATGCTGAAGGCTGAAAGACAGGAAAGATGGTGCCATCAGCAAATATTATTCTTA
ATTGAAAACCTTGAAATGTGTATGTTTCTTACTAATTTTTAAAAATGTATTCCTTGCCAGGGCAGGCAAGGTCGTC
ACGCCTGTAATCCCAGCACTTCAGGAGGCTGAGGTGGGCGGATC

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FIGURE 608

ATCTCACGTTAGCTAGAGACAGAACTGGAGCTAGCAGTCAGATCTCTTACAAAGTTGCCTTTCTTCTTCTGTGGG
TAAGTGGGGCACCCTTGGGACGCTGTGCTGGGCGTACATGGGTGCTTGATGAAGTTACTTGGTGGACTGATGTGA
TTGATGTCCAACATGTATGCAGGGACAGAGGCTATGGTCCCTACAGAGCAGGCATGGAGAGAAGGAGAAATACAT
ACGGNN
NNNNNNNNNNNNNNNNNNNNNTTGCTTGCTAAAGAAGTGGTCTCCTGAGGTCTTAAGACGTTTCCTGACAATGTCTT
GAGTGGGTGGGAGAGAGGCTGCAGTCATTGTGCTGTGGAATTTGAGAGGTGAGAACCACACCTAACCAAAATTAC
TTTCCCTGTTTGCTCAGTGACACAGCTGCAGGAACCCTGGTGGGTGTTGTATTAAAGTAAATTTGACCTTTATTCT
TTTGAGATCTGTGAAATGTTGTCTTCTGAGGGGCCAGTGTATCTGTAGTGTGCTGAGGACTCCTTGGGCCCTCTGA
AGTCACAGAGAGAACCCTGCAGGGTGGGGGACCAGTGTGTGACAGCCCTGCTTTGCATTTTCTTTGAGAAGTGCT
GTCATTTTGCATTTCTCTCCACCAGGGCAATCTTCAATCTTGAGAGGTGTGATCATAACTTGCCTTGTTTCTTGT
CGCTACAGAGAACGGAAGGCTCCCTTGATGGAACCTTAGACAGCAAGGCCAGATGCACATCCCTGGAAGGACATCC
ATGTTCCGAGAAGAACAGATGATCCCTGTATTTCAAGACCTCTGTGCACTTATTTATGAACCTGCCCTGCTCCCA
CAGAACACAGCAATTCCTCAGGCTAAGCTGCCGGTTCTTAAATCCATCCTGCTAAGTTAATGTTGGGTAGAAAGA
GATACAGAGGGGCTGTTGAATTTCCACATAACCCTCCTTCCACCAAGTTGGAACATCCTTGGAATTTGGAAGAGC
ACAAGAGGAGATCCAGGGCAAGGCCATTGGGATATTCTGAAACTTGAATATTTTGTGTTTGTGTCAGAGATAAAGAC
CTTTTCCATGCACCCTCATAACAGAAACCAATTTTCTTTTTTATACTCAATCATTTCTAGCGCATGGCCTGGTT
AGAGGCTGGTTTTTTCTCTTTTCTTTTGGTCCTTCAAAGGCTTGTAGTTTTGGGTAGTCCTTGTTCTTTGGAAAT
ACACAGTGCTGACCAGACAGCCTCCCCCTGTCCCTCTATGACCTCGCCCTCCACAAATGGGAAAACAGACTAC
TTGGGAGCACCGCCTGTGAAATACCAACCTGAAGACACCGTTTCAATTCAGGCAACGCACAAAACAGAAAATGAAGG
TGGAACAAGCACAGATGTTCTCAACTGTTTTTGTCTACACTCTTCTCTTTTCTCTACCATGCTGAAGGCTGA
AAGACAGGAAGATGGTGCCATCAGCAAATATTATTCTTAATTGAAAACCTTGAATGTGTATGTTTCTTACTAATT
TTTAAAAATGTATTCCTTGCCAGGCCTAGACAAGGATCGCTCACGCCTGTATATCCAGCACTTCAGGTAGAGCT
GAGGTGGGCGGTATCGACCTGAGGTGAGGTAGCTTTGAGACCAGCCTGATGAAACNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNTAGGTTGTAGTGTAGCGGACCTCGCGCCACTGGCACTCCTAGCTCTGAGTGACTA
GAGTGAGAATCCATCTCAAAAAACAAATAAAACAAAATTGCTTGCTAAAGAAGTGGTCTCCTGAGGTCTTAAGAC
ATTCCTGACAGTGCTTGTAGTGGGTGGGAGAGAGGCTGCTGTGCTTGCCTGTGGAATTTACAGATGAGAACCA
CGCCTAGCCAAAATCACTTTTCTGTTTGCCTCAGTGACACAGCTGCAGGGACCCTCGTGGATGTTGTATTAAAT
AAATTTGACCTTTGCTCTTTGAGATCTGTGAAATGTTGTCTTCTGAGGGGCCACATGCATCTATAGTGCTGAGG
ACTCCTTGGGCCCTCTGAAGTCACAGAGAGAACCGAGCAGGTCTATGTTTTTGT

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FIGURE 609

LTLARDRTGASSQISYKVAFLLLWVSGAPLGRCAGRTWVLDEVTWWTVIDVQHVC DRDGYGPYRAGME RRRNTY
GXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXLLAKEVVS

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FIGURE 610

AGTGCGCATCCGGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTGAAAGCAGGGACTAAAAGCCCCACTTCG
TCTTACGTTCCGAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAG
TCCTGAGTTGAGGCTTGCGGGATCCTTTCCGGAGAAAGCGCAGGCTAAAGCCGCAGGTGAAGATGTCCAACACTACG
TGAACGACATGTGGCCGGGCTCGCCGCAGGAGAAGGATTCGCCCTCGACCTCGCGGTGCGGGCGGGTCCAGCCGGC
TGTCGTGCGGGTCTAGGAGCCGCTCTTTTCCAGAAGCTCTCGGTCCCATTCCCGCGTCTCGAGCCGGTTTTTCGT
CCAGGAGTCGGAGGAGCAAGTCCAGGTCCCGTTCCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGT
CATACTCGCGGAGCCGGTTCGCGATCCCGCAGCCGCCGTTACCGAGAGAGGCGCTACGGGTTACACAGGAGATACT
ACCGGTCTCCTTCGCGGTACCGGTCCCGGTCCCGTAGCAGGTGCGGCTCTCGGGGAAGGTGCTACTGCGGAAGGG
CGTACGCGATCGCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGA
GGGACAGATCCAGGACGAGGTGCGGGAGCAGAACCCCTTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAG
AAATAGCAAAAACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTT
CTTCAGCCAAAGAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAAGTAAGTATTCTAGGTT
TGTCGGAACAAAACCTTTCAGAAAGCCAACTGTCAAATCTGATTAGCCACTTATATCTTAGACTATACTTTTTGGG
AAGTCTAGAGATGTATATAATGTGCTAAATTCAAAGTAGCAAATCTGAAGATAGGCAATGTCAAACCCATGAAAA
TGGGAGATTAATGAGCTTTATTTGGCCGTGCATGGTGCCCTCATGCCTGTAATGAGGCAGATGGCTTGAGTCCAGG
AGTTCAAGACTAGCCTGGGCAATGTGGCAAAACCGCGTGTTTACAAAAATACAAAAATTAGCCAGGCATGGTGG
TGCATGCCTGTAGTCCCAGCTGTTTGGGAGGCTGAGGCAGGAGGATCTTTGAGCCTAGGATGCTAAGGTTGCAGT
GAGCCAAGATGGCACCATTGCACTCTAGCCTGGGCAGCAGAGCGAGACCCTGTCTCAAAAAATACATTTATTTTT
TTCATTTTTCAGTTAACAGTGTACTCTTATAACACCGTTATTAGCTGGTACTTTGGTGATTCTATTACTAGTTTT
TCTAAGCTATTTACAGAGTGTGTTGTAGCTTTTATTGTCAGCATTATGTTCCCAAAAATTCTGTACTCAGCATATA
CAGTATAGTTTTATCTGCTCTATTTCTGTCTTATAGAAATCATGAATGTGGTCTGCAGACATTGATGAAGAAAATC
TGTTGGTAATTGATACATGGGCTAAAGCATCAGAGGTTTAATTTGAAGTTTATGTTTACACACTGAAAACCTTAGT
TTTTTTGTTGGTAGATCCATGTGCATGCTAGAATTTGGGACAGGCACTATTTGCATAAAGTATTAAAGTCAATTT
TTAAACTAAGCAAAGGTACACGTTGTAACGGTGGGGCATCTGTGAAAAAGATGTCCCTTTCATAATATATGCAAT
ATATTCCAGATGTTTTGAGAGATTACAGAAGAGGAGGCCTGCTTCACTTGCAGATAAGTTTATTATAATTCTCCA
GAAATGTGCAGGATGTGCATTAGCAAATTGCACTGTACTTTTCACTCCAGCCTGGGTGACAGAGCAAGACTCCCG
TCTCGGGGGCTT

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FIGURE 611

MSNYVNDMWPGSPQEKDSPSTSRSGGSSRLSSRSRSRSFSRSSSRSHSRVSSRFSSRSRRSKSRRSRRRRHQRKYR
RYSRSYSRSRSRSRSRRYRERRYGFTRRYRSPSRYSRSRSRSRSRGRSYCGRAYAIARGQRYYGFGRTVYPEE
HSRWRDRSRTRSRSTPFRLSEKDRMELLEIAKTNAAKALGTTNIDLPA SLRTVPSAKETSRGIGVSSNGAKPEV
SILGLSEQNFQKANCQI

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FIGURE 612

GGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTTCGAAAGCAGGGACTAAAAGCCCCACTTCGTCTTACGTTCC
GAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAGTCCTGAGTTGA
GGCTTGCGGGATCCTTTCCGGAGAAAAGCGCAGGCTAAAGCCGCAGGTGAAGATGTCCAACCTACGTGAACGACATG
TGGCCGGGCTCGCCGCAGGAGAAGGATTTCGCCCTCGACCTCGCGGTTCGGGCGGGTCCAGCCGGCTGTCGTGCGGG
TCTAGGAGCCGCTCTTTTTCCAGAAGCTCTCGGTCCCATTCGCCGCTCTCGAGCCGGTTTTTCGTCCAGGAGTCGG
AGGAGCAAGTCCAGGTCCCCTTCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGTCATACTCGCGG
AGCCGGTCGCGATCCCGCAGCCGCCGTTACCGAGAGAGGCGCTACGGGTTACCAGGAGATACTACCGGTCTCCT
TCGCGGTACCGGTCCCGGTCCCGTAGCAGGTGCGGCTCTCGGGGAAGGTTCGTACTGCGGAAGGGCGTACGCGATC
GCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGAGGGACAGATCC
AGGACGAGGTTCGCGGAGCAGAACCCCTTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAGAAATAGCAAAA
ACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTCCCTTCAGCCAAA
GAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAACTGTTCGGAAGGTAACAGAAGATGGA
ACTCGAAATCCCAATGGAAGAACCTACCCAGCAAAGAAGCATAGCTTTTAGCTCTAATAATTCTGTAGCAAAGCCA
ATACAAAAATCAGCTAAAGCTGCCACAGAAGAGGCATCTTCAAGATCACCAAAAATAGATCAGAAAAAAGTCCA
TATGGACTGTGGATACCTATCTAAAAGAAGAAAAGTATGGCTAAGTTTGCATGAAAAGTGCACCTTTATTGCAAG
TTAGTGTCTTAGCATTATCCCATCCCTTTGAGCCATTTCAGGGGTACTTGTGCATTTAAAAACCAACAAAAAG
ATGTAAATACCTAACACTCAAATATTAACATTTTAGGTTTCTCTTGCAGATATGAGAGATAGCACAGATGGACCA
AAGGTTATGCACAGGTGGGAGTCTTTTGTATATAGTTGTAAATATTGTCTTGGTTATGTAAAAATGAAATTTTTT
AGACACAGTAATTGAACTGTATTCCTGTTTTGTATATTTAATAAATTTCTTGTTCATTCTTAAAAA
AAAAAA

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FIGURE 613

CTTTTCTCCATCTCAGAACCTTCCTGCCGTCGCGTTTGCACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAAC
CTTCCAGCCTGCGACCTGCGGAGAAAAAAATTACTTATTTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAA
AATTAAATTTTAACCATGAGGGAAATCGTGACATCCAGGCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTC
TGGGAGGTGATCAGTGATGAACATGGCATCGACCCACCGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAC
CGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAATATGTTCCCTCGTGCCATCCTGGTGGATCTAGAACCT
GGGACCATGGACTCTGTTCGCTCAGGTCCTTTTGGCCAGATCTTTAGACCAGACAACCTTTGTATTTGGTCAGTCT
GGGGCAGGTAACAACCTGGGCCAAAGGCCACTACACAGAGGGCGCCGAGCTGGTTGATTCTGTCTCGGATGTGGTA
CGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTCCAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCT
GGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAATACCCTGATCGCATCATGAATACCTTCAGTGTGGTG
CCTTCACCCAAAGTGCTGACACCGTGGTCGAGCCCTACAATGCCACCCCTCTCCGTCCATCAGTTGGTAGAGAAT
ACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTATGATATCTGCTTCCGCACTCTGAAGCTGACCACACCA
ACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATGAGTGGTGTCACCACCTGCCTCCGTTTCCCTGGCCAG
CTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTCCCCCTTCCACGTCTCCATTTCTTTATGCCTGGCTTT
GCCCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCTCTCAGAGTGCCGGAACCTACCCAGCAGGTCTTCGAT
GCCAAGGACATGATGGCTGCCTGTGACCCCGCCACGGCCGATACCTCACCCTGGCTGCTGTCTTCCGTGGTCCG
ATGTCCATGAAGGAGGTCGATGAGCAGATGCTTAACGTGCAGAACAAGAACAGCAGCTACTTTGTGGAATGGATC
CCCAACAATGTCAAGACAGCCGTCTGTGACATCCCACCTCGTGGCCTCAAGATGGCAGTCACCTTCATTGGCAAT
AGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAGCAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCCTC
CACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCT
GAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAGGAGGATTTCCGTGAGGAGGCCGAAGAGGAGGCCTAA

GGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCCTTTCTCTCCCTCAG
AATTTGTGTTTGCTGCCTCTATCTTGTTTTTTGTTTTTCTTCTGGGGGGGGTCTAGAACAGTGCCTGGCACAT
AGTAGGCGCTCAATAAATACTTGTGTTGAAAAAAAAAAAAAAAAA

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FIGURE 614

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLOGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTPPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVPFRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDAKDMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVC DIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYT GEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEEDFGEEAEAAA

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FIGURE 615

TGTTCCGCGATCTTCTCAGGCTCTCCTAGCAGCATCCATCGCCGCCACCCCTATCTTCACTGGCTTCACCTTCTCC
TTCTCTCTTCGTTGCTGAGCGACAAGCTTCCTAGCGCTATGACTGTCTGCTCCGTCCCGCAGCGGGAGCCGCTCG
TCCTGGGTGGCCGCTTGCGCCGCTTGGCTTTTCTCCCGAGGTTACTTTGGGGCCCTCCCGATGGTGACCACGG
CTCCGCTCCTTTACCCCGGATCCCGGACCCCCGGGCACTGCCCCGACCCCTCTTCTCCTCATTTCCTAGGGG
GAGATGGCCCGTGTCTGACCCCCCAGCCTCGCGCTCCAGCAGCTCTGCCCCAACCGCAGCCTCGCCGTGGCGGGAG
GCACTCCTCGGGCAGCGCCGAAGAAGCGGCGAAAGAAGAAGGTGCGGGCCAGCCCCGAGGGCAGCTGCCCAGCC
GCTTCCACCAGTACCAGCAGCACCGGCCGAGTCTGGAGGGCGGCCGGAGCCCCGCGACCGGCCCGAGCGGAGCGC
AGGAGGTCCCGGGCCCGGCCGCCGCTTGGCCCCGAGTCTGCGAGCCGCGAGCCGGCACGGAGGGAGCCAGCCCCG
ACCTTGCCCCGCTGCGGCCCGCGGCTCCCGGCCAAACCCCCCTCAGGAAAGAGGTTTTAAATCAAAGATGGGAA
AATCGGAGAAAATTGCCCTTCCCATGGCCAGCTTGTTCATGGTATACACTTGTATGAGCAACCAAAGATAAACA
GACAGAAAAGCAAATATAACTTGCCACTAACCAAGATCACCTCTGCAAAAAGAAATGAAAACAACCTTTGGCAGG
ATTCTGTTTCATCTGACAGAAATCAGAAGCAGGAAAAAAGCCTTTTAAAAATACCGAGAACATTAAAAATTGCG
ATTTGAAGAAATCAGCATTTCTAACTGAAGTGAGCCAAAAGGAAAAATTATGCTGGGGCAAAGTTTAGTGATCCAC
CTTCTCCTAGTGTTCTTCCAAAGCCTCCTAGTCACTGGATGGGAAGCACTGTTGAAAATTCCAACCAAAACAGGG
AGCTGATGGCAGTACACTTAAAAACCCCTCCTCAAAGTTCAAACCTTAGATTTCAGATTTTCACTATGTGTGTAAC
ATAATTTTTCCCATATCCCTGGACTCTTGAGAAAATTGGTACAGAAATGGAAATTTGCCTTGTTGCAACATACAA
TTGCAAAAGATGAGTTTAAAAAATTACATACAAACAGCTTGTATTATATTTTATATTTTGTAAATACTGTATACC
ATGTATTATGTGTATATTGTTTCACTTGAGAGGTATATTATAGTTTTGTTATGAAAGTATGTATTTTGCCCTGC
CCACATTGCAGGTGTTTTGTATATATACAATGGATAAAATTTAAGTGTGTGCTAAGGCACATGGAAGACCGATTT
TATTTGCACAAGGTACTGAGATTTTTTTCAAGAAACAGCTGTCAAATCTCAAGGTGAAGATCTAAATGTGAACAG
TTTACTAATGCACTACTGAAGTTTAAATCTGTGGCACAATCAATGTAAGCATGGGGTTTTGTTTCTCTAAATTGAT
TTGTAATCTGAAATTAAGTGAACAACTCCTATTCCCATTTTTGCTAAACTCAATTTCTGGTTTTTGGTATATATCCA
TTCCAGCTTAATGCCTCTAATTTTAAATGCCAACAAAATTGGTTGTAATCAAATTTTAAATAATAATAATTTGGC
CCCCCTTTTAAAAATAGTCTTGACTCTTTGTGTGTGACTGTTTCTCATGTTTGAATGTGTGACTAGGAGATGATT
TTGTGTGGTTGGATTTTTTTGACTTCTACTTTTACTGGCTGAGTGTGAGCCGCCATGCCTGGCCATAATCTACATT
TTCTTACCAGGAGCAGCATTGAGGTTTTTTGAGCATAGTACTTGACTACTCTAGAGGCTGAGACGGGAGCATCTCT
TGAGCCTGAGAAAGTGGAGATTGCAATTGAGCTAGGATCAGGCCACTGCACTCCAGCCTGGGTAACAGACGCTGTC
TCAAAAAAAGGCCAAGAGAAAGTAAGGGAGACAGA

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FIGURE 616

MTVVSVPQREPLVLGGRLAPLGFSSRGYFGALPMVTTAPPPLERIPDPRALPPTLFLPHFLGGDGPCLTPQPRAP
AALENRSLAVAGGTPRAAPKKRRKKKVRASPAGQLPSRFHQYQQHREPLEGGRSPATGPSSGAQEVPGPAAALAPS
PAAAAGTEGASPD LAPLRPAAPGQTPLRKEVLKSKMGKSEKIALPHGQLVHGIHLYEQPKINRQKSKYNLPLTKI
TSAKRNNENFWQDSVSSDRIQKQEKKPFKNTENIKNSHLKKS AFLTEVSQKENYAGAKFSDPPSPSVLPKPPSHW
MGSTVENSNQNRELM AVHLKTLLKVQT

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FIGURE 617A

AGAGATGGGTCTCGCCATCACCATGTTGCCAGTCTGGTCTCCAACCTCCTGGGCTCAAGCGATCCTCCTGCCTTG
GTCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCCCACACCCGGCCTGAGTGAGTGGGTCTGAATGGTGACTG
TTGTTGTCCATAGCCTTCCCCCTGCTTCTGAGAGTGGAGTCCCTCCCCTCATGTTGGAGACCTCCCAAGGTCCAT
GTGGTCTATAGGGGCTGTTTACGCTCCCTAGCCCCCTTAACGTGTCAGGTAATACTGTATATATTCATGAAATG
TGAATAATTAGTTATATAATTCCTAAGCACTTATTTTAAAAACAGCAATGTGATGCTTAACCTCTTCCCACCTCT
GTTCTGTCCCCCTTAGAAAACCACTGATAACTCTTTTTTTTTTTTGGAGACGGAGTCTTGCCCTGTCGCCCAGGCT
GGAGTGTAGTGGCCTGATCTCGGCTCGGCTCATTGTAACCTCCGCCTCGGGTTTGAGCGATTCTCCTGCCTCAGC
CTCCTGAGTAGCTGGGATTATAGGCGTGACCACCACGCCTGGCTAATTTTTTGTATCTTTAGTAGGGACGGGTT
TCACCATGTTGGCCAGAGTGGTCTTGAACCTCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGTGGGA
TTACAGGCATGAGCCACCGTGCTGTCTAGAACCACTGGTAACCTCTTAACGTGXXXAGTGTTCTAAGAACGGAAG
CATCTGGGCTGGATGGAATTTAGCATCAAGCAGAGTCCCCCTTTCTGTTTCAAGAGTGTGTAAAGTGCATAAAGATG
AAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTCCGAGCTGCGAGGTGAACCGCGAGTGTCTGTG
TTCTCAGCAAAGCCAGCTCTCCAGTAGCCTGCAGGAGGGGTCATGCAGAAGTTTAAACGGCCACGACGCCCTG
CCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCGGGTGTTTAAATGGAGAACCCGGCGCACACGATGCC
AAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACACCCCTAACACTACCCCTATCAAAAATGGCTCT
CCAGAAATTAAGCTGAAATACCAAAACATACATGAATGGGAAGCCTCTCTTTGAATCTTCCATTGTGGTGAC
AGTGCTGCTGATGTGTCTCAGTCAGAAGAAAATGGACAAAAACCAGAAAACAAGGCGAGAAGGAACAGGAAGAGG
AGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTGCAAGCAGCTCTTGTGTCTAAGATCTCAAGTCTTCA
GATAAAAAGATTCCAGCTAAGAAAGAGTCTTGTCCAAACACTGGAAGAGACAAAGACCACCTGTTGAAATACAAC
GTTGGTGATTGGTGTGGTCCAAAGTGTGCGGTTACCCTTGGTGGCCTTGCATGGTTTCTGCAGATCCACTCCTT
CACAGCTATACCAAACCTTAAAGGTGAGAAAAGAGTGCACGCCAGTATCACGTACAGTCTTTGGTGACGCCCA
GAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAGGAGAAGGACAGTTTGAAAAATTATGCCAGGAA
AGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTATTGAAACCAATTTACAGGAAATTGAGGGCCAG
TGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGTGAGTGGAGGAGCGGAAAGCCAAGTTCACCTTT
CTCTATGTGGGGGACCAGCTTCATCTCAACCCCTCAAGTAGCCAAGGAGGCTGGCATTGCTGCAGAGTCTTTGGGA
GAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAAACCCCAAGTCTGTGAGAGAAGAGTGCAATCCC
ATGAAGAGAAGGCGGAGGGCCAACTGTGTAGCTCTGCAGAGACCCTGGAGAGTACCCCGACATAGGGAAGAGT
ACTCCTCAAAAGACGGCAGAGGCTGACCCAGAAAGAGGAGTAGGGTCTCCTCCTGGGAGGAAGAAGACCACAGTC
TCCATGCCACGAAGCAGGAAGGGAGATGCAGCATCCCAGTTTTTGGTCTTCTGTCAAAAACACAGGGATGAGGTG
GTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGCTGCTCAGGTACAGTGGAGTCTGCTGAGTGAG
AAGCAGAGAGCACGCTACAACACCAAGTTTGCCCTGGTGGCCCCCTGTCCAGGCTGAAGAAGACTCTGGTAATGTA
AATGGGAAAAAAGAAACCACACAAAGAGGATACAGGACCCCTACAGAAGATGCTGAAGCTGAGGACACACCCAGG
AAAAGACTCAGGACGGACAAGCACAGTCTTCGGAAGAGAGACACAATCACTGACAAAACGGCCAGAACAAGCTCT
TACAAGGCCATGGAGGCAGCCTCCTCGCTCAAGAGCCAGGCAGCAACGAAAAATCTGTCTGATGCATGTAAACCA
CTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTCTTGGGTTTAGCAAAAGTTTCTCTCTCTGCA
TCCTTAACTGAGAATGAGGTCTCGGACAGCCCGGAGACGAGCCCTCGGAGTCCCCATACGAAAGTGCAGACGAA
ACACAACTGAAGTATCTGTCTCATCAAAAAGTCTGAGCGAGGAGTGAAGTGCACAAAAGGAGTATGTGTGCCAG
CTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACCCTGCTGCGGAGCTTTCCACCTCGCCTGCCTTGGG
CTTTCCCGGAGGCCAGAAGGGAGGTTTACCTGCAGCGAGTGTGCTCAGGGATTCACTCATGTTTCTGTGTGTA
GAGAGCAAGACAGATGTTAAGCGCTGTGTGGTAACTCAGTGTGGAATTTTACCATGAGGCTTGTGTGAAAAA
TACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCCCCTCCACAGCTGTGTGAGCTGCCATGCTTCCAAC
CCTTCAAACCAAGGCCGTCAAAGGTAATAATGATGCGGTGTGTCCGCTGCCCCGTTGCCTATCACAGCGGGAT
GCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAGCATCATCTGCACTGCCACTTCACTGCTCGGAAG
GGGAAGCGACACCACGCCACGTCAACGTGAGCTGGTGTCTGTGTGCTCCAAAGGGGGGAGCCTTCTGTGTGT
GAGTCTGCCCAGCGGCCTTCCACCCTGACTGCCTGAACATCGAGATGCCTGACGGCAGCTGGTTCTGCAATGAC
TGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTGGGTGAAACTTGGGAACCTACAGATGGTGGCCGGCA
GAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTAGAAAATGAAGCACGAGATTGGAGAATTCCCTGTGTTT
TTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGGAGTGTCCCGTACATGGAGGGGGACCGGGGCAGC

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FIGURE 617B

CGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAACGCACTGCAAGAAGCTGAAGCTCGTTTTTCGTGAA
ATTAAGCTTCAGAGGGAAGCCCGAGAAACACAGGAGAGCGAGCGCAAGCCCCACCATAACAAGCACATCAAGGTG
AATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATATTTTCAGAAATCCCTAAGTGCAACTGCAAGCCCACA
GATGAGAATCCTTGTGGCTTTGATTTCGGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCCGCAGGTGTGT
CCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTACCCAGAGACCAAGATCATCAAGACAGAT
GGCAAAGGGTGGGGCCTGGTCGCCAAGAGGGACATCAGAAAGGGAGAATTTGTTAACGAGTACGTTGGGGAGCTG
ATCGACGAGGAGGAGTGCATGGCGAGAATCAAGCACGCACACGAGAACGACATCACCCACTTCTACATGCTCACT
ATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAACTACTCTCGATTTATGAATCACAGCTGCCAGCCC
AACTGTGAGACCCTCAAGTGGACAGTGAATGGGGACACTCGTGTGGGGCCTGTTTGCCGTCTGTGACATTCTGCA
GGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGGCAATGAAAAACGGTCTGCCGGTGTGGAGCCTCC
AATTGCAGTGGATTCTCGGGGATAGACCAAAGACCTCGACGACCCTTTCATCAGAGGAAAAGGGCAAAAAGACC
AAGAAGAAAACGAGGCGGCGCAGAGCAAAAGGGGAAGGGAAGAGGCAGTCAGAGGACGAGTGCTTCCGCTGCGGT
GATGGCGGGCAGCTGGTGTGTGTGACCGCAAGTCTGACCAAGGCCTACCACCTGTCTGCTGGGCCCTTGGC
AAGCGGCCCTTCGGGAAGTGGGAATGTCTTGGCATCATTGTGACGTGTGTGGCAAACCTTCGACTTCATTTTGC
CACCTCTGCCCCAATTCTGTTCTGTAAGGAGCACCAGGACGGGACAGCCTTCAGCTGCACCCCGGACGGGCGGTCC
TACTGCTGTGAGCATGACTTAGGGGCGGCATCGGTGAGAAGCACCAAGACTGAGAAGCCCCCCCCAGAGCCAGGG
AAGCCGAAGGGGAAGAGGCGGCGGCGGAGGGGCTGGCGGAGAGTACAGAGGGCAAAATAGCGCCAGGCGGCCGT
TGCCCGGATCCAGGGGCGGTGCAGGGCGGCCGCGCCCTGCCTGCGGGAGAGGGCGAGCATGAACTGGCCCGGAGGA
CCCAGCTCGAGCCGCCAGGACACAGACGTACAGGCCTCCTCGGGAGGGAGCGCCTCCCCACCACTGAGCCATCCT
CAGCAGCGTCCGCTGCGTCTGCACTGATGACCGTCTGAGCCAGCTCAGCGTTCCTGGACAAACAGCCTCACTCC
TCAGCGTTACCGCCACACTTGAATTTCTCCGAATGTCAAGGTTCCCTCCCACTCTATTTTTTTAGGTTAAAGTTA
ATTGGCATATGGAATGTTTAACTCTCTGAAATGTGTAGCGTAGGCTTTTCCCAAGGGTTCGCTAGAAACTCGT
CTTCGCGTTGCCCCCTTCTGCGTCTCAGCGCCGTGCGCACTCGGGAGAGGCTGGGTGAGGCCGTGTGAGGACT
GACCCTGGATTCTCGAAACTGCCATTGTGATCATTACTCTGCTCTTTGGTGGCTGTATCATTTTTTTGTACTAA
TGTGAATTGTTCTCAGAAACGCTTCTTTTCCATCCTAGTGAGAAGCTGGCCCTGCAGGTGGTGGCAGCAATGGT
GTTGTAAGATTTCTCCCGTAGTTTTTCTCCTCATGGATTTGAATGAAATGCCAATAACACGTCCACTTTCAAC
GTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGGTGGGCCCTACTTCTCACCTGGGCCTATCTTCTGAAC
CGCTAGGTTCTTATCAACATTTGGGGGATAACTTTGTATATTTTTTTTCAATTTGGCTTTTCTTTACCAGTTTCTGA
TTTTTATTCTCAATATATTTTTTGTAAACCTATTTACAAATCACCACCGACTGAAGTGTGTGTTTACTGATGCG
GCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGGCGTGAGACCGCAGTCTGCTTAGAGCACAGGAAGTGAC
AATTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGGACCCAGCACGTGGGTCTAAAGAGAGACGGAGTCTAG
CTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTCTGTGGGTCTGGTGATGGAAGATGCAGTCTCTGCTGAT
CACATGTGCCCTCTGCCAGGGCACCTACTGAGAGGTGCGGTCTGGGGGTGGAGGCCTGCCTGGCAGGTGTGCGT
GCCTCGTACGTGTGTTATGGGCACTGGTCTAGGCCAGGTATGACACCCACTCTCCTGTGAGATTTCACCTTAGTT
TTTAAAAGGTCCAGTTCTACAGAGTGAGACCTATCTATCTGAGTACTACATATGTTTTTAAGACTTGGTCTTTTT
TTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCCCTGAGAAGGGGGCACCATGTGTGCCCTTTGCCACGTGTC
CTGAGGGGCTGCTTGTCTGGGAGGGAGGGAGAGAACATTCAGCAGCAGGTGCTTTTTTTATGGCCTTTTCTTAAAA
TAACCTAAGGGGGACACATCCATCTTGACAGAGAAGTTTACAGAACTCCCCTTGAAAACCTGCTGCTGAGGCTCCTG
TTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAACTGCAGTGTCTTTGGACCTGAGAGTGGCTACTCCGTG
GTTTTGTGACCTGTAAGCGTGGGGTTCAGGGGTGTGTGGCCCTGCAGGGTCCCACGCCTCCCTGAGCACTGACTG
GAAGTTTCACTGGCTGGTGGCTGTCCCTTCTCCCATCAGGGTCCCCAGCAAAGTTAACTACACAGAGGACCCAGG
GGAACGAGCTGTGTAGCCACTGACTTGCTCGCGCGGCCGTGGCCCTCTGAGGGGCACTCGCCGTTAAGACAGGG
TGGGAGTAGTGTCTTCCAGTTACAGACTCTAACTTCTCCCAAAGTGTCTAAGAAAATACTGGATCGGCTCATAGA
TTTATGCTCCTTATGATGCCCTAACTTGGAAAGGTTGTTCTAGGGACAGGCCGGGAGTGTCCCCACACACACCTT
AGAGTCGAAGGCCCCAGGGCCCCGCTGTCACTTGCCCAAAGATCCCTTCCGGCAGGTAAGGGACTACCAATGCT
TACGTCAAAAACAGCAGAATCGGCTTTGCAGTGCACCTTGGGGAGCAGATATTAAGTTATTTTTGTGTTGGACAGT
AGTGAAAATCTTGTGATTTTTTAACTCGCTTTGATAATACTTCCAAATTTTATGATTTTTCTGAAGGAAATAATGCA
ACATTTTAAATATGTTTCTCCCCCTTTCCAAAACCTGTAAACTAATGAGCAAGTAACACTAAGTTGATGTCT

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FIGURE 617C

CTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTTGGGGTAGCGGCCCTGAGCTTGCAGGGTTTCTCGCCAC
TGGGGCTGACCACGCCCCCAGCTGTGACCGTGGGTGTGGCTGGCTCTCGGCCCTGCCCAGCTTTGTTCTGAGGAC
GTGGTGACTTCCTGAACATCAGCTTCAATCCTCCATCATTAAATGTGAAGCAAAACACAAAAACCGCCCCAATCCC
TCAGGATTTCCTTGGCATCCGAAACCAGCATCTGCACCTAAACCCATACCCACCCGTTGTGCGCCACAGGGGGATG
TGTCCGAATGGGCAGCTTAAAATGTGGTCACCTGTGGGGGAAACTCTTCAGGCACCTGAAGTGAGAACCCAGCTG
TCCGTCCTCAGGCCGGCCTTTCTTCCGGCGACACCCGTCCATGGCTGGCTGGGTCCCCTTCGCAGTGTTTGTCTG
TCTTGACATCTAAACCCCGGCGTGTGCAGTGCCCATCTTCCAGGACTACCTTATTTTCCAGAATTAAACCTGTTT
TATAATTCAAGTTAATGCAAATGACTGTCAGTTGCCAAATATCTTGATCCTGTGAGTGTAGTTGATGACTGTTT
TTCAGTCAGTAGAGTAAAATGCTGTGTCCACGGGGTGTACAGCCTCACCATACCCTGTTGAGGTGTGAAATGCC
CGTCAGAAATTAAATACAACTTAAATGTGCCTATTGGTGTCTAACTTCATACAATGTAAGGTCAGATTCCTTT
TAGGAATACTGGGTGCTGTCACCAGGTTTGATAGTTAGACTTAAAACTTGAAATTCACTTTTTGGGGGGAGGGA
TATACTGAAATAGAGAGTTGAGACTTGCCAGTTGGGGGAAAATAGCATTTAAATGAAAGCTGTGTTTGGAAAA
TTGTGTATGAGTATTTTTGTATTAAAAACATTTTAA

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FIGURE 618

MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFI
ADKLDLTSRVFNGEPGAHDALRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD
VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLKYNVGDL
VWSKVSGYPWWPCMVADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ
APTKAEKIKLLKPI SGKLRAQWEMGIVQAEAAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE
SSGVSEEAENPKSVREECIPMKRRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMPR
SRKGDAA SQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK
RNHTKRIQDPTEDAEAEEDTPRKRLRTDKHSLRKRDTITDKTARTSSYKAMEAASSLKSQAATKNLSDACKPLKKR
NRASTAASSALGFSKSSSPSASLTENEVS DSPGDEPSES PYESADETQTEVSVSSKKSERGV TAKKEYVCQLCEK
PGSLLLCEGPCCGAFHLACLGLSRRPEGRFTCSECA SGIHSCFVCKESKTDVKRCVVTQCGKFYHEACVKKYPLT
VFESRGFRCP LHSCV SCHASNPSNPRPSKGKMMRCVRCPVAYHSGDACLAAGCSVIASNSI ICTAHFTARKGKRH
HAHVNVSWCFVCSKGG SLLCCESC PAAFHPDCLNIEMPDG SWFCNDCRAGKKLHFQDI IWVKLGNYRWWPAEVCH
PKNVPPNIQMKHEIGEFPVFFF GSKDYYWTHQARVFPYMEGDRG SRYQGV RGIGRVFKNALQEAEARFREIKLQ
REARETQESERKPPPYKH I KVNKPYGKVQIYTADISEIPKCNCKPTDENPCGFDSECLNRMLMFEC HPQVCPAGE
FCQNQCFTKRQYPETKI I KTDGKGWGLVAKRDIRKGEFVNEYV GELIDEEECMARIKHAHENDITHFYMLTIDKD
RIIDAGPKGNYSRFMNHSCQPN CETLKWTVNGDTRVGLFAVCDIPAGTELT FNYNLDCLGNEKTVCRCGASNC SG
FLGDRPKTSTTLSSEEKGKTKKKTRRRRAKGEGKRQSEDECFRCGDGGQLVLC DRKFCTKAYHLSCLGLGKRPF
GKWECPWHHCDVC GKPSTSFCHLCPNSFCKEHQDGTAFSCTPDGRSYCCEHDLGAASVRSTKTEKPPPEPGKPKG
KRRRRRGWRRVTEGK

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FIGURE 619

AGGCTGTCTGCAGAGATTTGAAAAATGGCAACAAATGAAAGTGTGAGCATCTTTAGTTCAGCATCCTTGGCTGTG
GAATATGTAGATTCACTTTTACCTGAGAATCCTCTGCAAGAACCATTTAAAAATGCTTGGAACATATGTTGAAT
AATTATACAAAGTTCCAGATTGCAACATGGGGATCCCTTATAGTTCATGAAGCCCTTTATTTCTTATTCTGTTTA
CCTGGATTTTTTATTTCAATTTATACCTTATATGAAAAAATACAAAATTCAAAAAGGATAAGCCAGAGACATGGGAA
AACCAATGGAAAGTGTTCAAAGTTCTTCTCTTTAATCACTTCTGTATCCAGCTGCCTTTGATTTGTGGAACCTAT
TATTTTACAGAGTATTTCAATATTCCTTATGATTGGGAAAGAATGCCAAGATGGTATTTTCTTTTGGCAAGATGC
TTTGGTTGTGTCAGTCATTGAAGATACTTGGCACTATTTTCTGTCATAGACTCTTACACCACAAAAGAATATACAAG
TATATTCATAAAGTTTCATCATGAGTTTCAGGCTCCATTTGGAATGGAAGCTGAATATGCACATCCTTTGGAGACT
CTAATTCCTTGGAACGGATTTTTTCATTGGAATCGTGCTTTTGTGTGATCATGTAATTCTTCTTTGGGCATGGGTG
ACCATTCGTTTATTAGAACTATTGATGTCCATAGTGGTTATGATATTCCTCTCAACCCTTTAAATCTGATCCCT
TTCTATGCTGGTTCTCGGCATCATGATTTCCACCACATGAACCTTCATTGGAACTATGCTTCAACATTTACATGG
TGGGATCGAATTTTTGGAACAGACTCTCAGTATAATGCCTATAATGAAAAGAGGAAGAAGTTTGAGAAAAAGACT
GAATAAATATCTCACGTAAACCTTCCTGAAAGATAAACGTTTTCTGAATTCAGAACTAGTAGCTAACATTGCT
TCTGGAGAGCAGAAATAAGCATGTCTTCTGGCTACTAAGTGATAAAAAAGAACATTAACAACCTTTAATTACCTTC
CTAGTGGGAACCTTTTTCTACTTTACCTACAAGTTCTATATATGTAGAAATGAATAAATATATATTTAAGTACAGT
TTTCATGAGGAAGTTTTAAAAGACCATGTTTCTAAGCTTCCAAGAAGGTTTTGGATACTAGAAGTATTAATCTAT
GGCTTTTCTCCCAGTAAAACCATAGGCCTGAAGTTCACATTGGGTCTTTAAATCTTTTAGATATATACTGGTCAT
TTCAGAAAATTCTTCATAGTGGTATTGGCCTTATATTTAACTTTTTTTTTTATTTTTTTTTTGAGACAAAGCCACA
CTCTGTCTCCTTGGCTGGAGTGTGGTGGCACAGTCTCAGCTCACTGCAACCTCTGCCTCCCAGTTCAAGCAATTC
TTCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACCCGCCACCACGCCAGCTAATTTTTGTATTTTTGT
GAGATGGGGTTTTACGATGTTGGCCAGGCTGGTCTCAAACTTCTGACCTCAAGTGATCTGCCCACCTTGGCCTCC
CAAAGTGCTGGGATTACAGGTGTAAGCCACTGCGCCCGGCCTTTTTAACTTTAAACATGTTTTAGAATTCACCTA
AAGATCAAAAATATCATGGATTGAACCTCATCAATTGATAGCAGTGAGTGACTGAAGCTTCCAATCAAGAAAAGC
CGGCACCAAGAACTTCCATTCTAATCTAGAGCTGACCAGTTTGAGCTGATTCTCTCTTTGAAGAGTCCTTCTTGA
TTGCAGTGCAGTACTGGCATTCTGAATGGATGTAAGTGGAGTATTTTAGTCTAAAGGCTTTTCAAATTACTTGA
ATTTTTTTAAAAATTGAGGAGCTTTATTTCTATTTACCCTTCCATTTTGTGTGAAAAAAAAAAAAAAAAA

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FIGURE 620

MATNESVSIFSSASLAVEYVDSLLENPLQEPFKNAWNYMLNNYTKFQIATWGS LIVHEALYFLFCLPGFLFQFI
PVMKKYKIQKDKPETWENQWKCFKVLLFNHFCIQLPLICGTYFTEYFNIPYDWERMPRWYFLLARCFGCAVIED
TWHYFLHRLHHKRIYKYIHKVHHEFQAPFGMEAEYAHPLETLILGTGFFIGIVLLCDHVILLWAWVTIRLLETI
DVHSGYDIPLNPLNLIPFYAGSRHHDFHHMNFIGNYASTFTWWDRIFGTDSQYNAYNEKRKKFEKKTE

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FIGURE 621A

GCGGGGACCGCGACGAGCCCGGGTCGCCGTTGGCAGCAGCAGCAGCAACACCAGCAGCAGCAGCAGCCCCGGCGG
CGGCGCGGAACCCCGAGCGCCCGGGCGCACCCGGCTTCCCGGAGCGCGACGCGGGCGGCAGCAGCCCGGTGCGG
CCGCGCGCGCCTTAGGCTCGGCCCCGCGGCTCGGGGACCCCGACTCCCGGCCAGCGAGCGCGTCCCCCGGCGCC
GCCCCGAGAGCCCGAGGAGGCAGCGGCCGAGAGCCCGGGGAGGGGGCGGCCACCGCCCGCGCCGGGCATCCTC
AGGAGCCCCAGAGCGCGGAGGGCGCGGCGCCGCGAGCGGTGCTGGCCCCCGCGGGCTCCCCGGACCTTCCCCAC
CGCTGGGCCCCGAGGGACGCGTGATCGGGCGGGCGGCCGGGCGCAAGGGTGGGAGGGAGCCGCCCGCCCGCGCGC
CCCCTCGCCCCCTCGCCCCAAACCCCTGGGCGCCGGGCCCCGGGCCGCGCGGCTGAAGCGCCCGCGATGGCGAGC
CCGCCGCGGCACGGGCCGCCGGGCGGCGAGCGGAGACGGCCCCAACCTCAACAACAACAACAACAACAAC
AACCACAGCGTGCGCAAGTGCGGCTACCTGCGCAACGAAGAGCATGGCCACAAGCGTTCTTCGTGCTGCGCGGA
CCCGGCGCGGGCGGCGACGAGGCGACGGCGGGCGGGGGTGGCGCCGCAACCGCCGCGGCTCGAGTACTACGAG
AGCGAGAAAAAGTGGCGGAGCAAGGCAGGCGCGCGAAACGGGTGATCGCTCTCGACTGCTGCCTGAACATCAAC
AAGCGCGCCGACGCCAAGCACAAGTACCTGATCGCCCTCTACACCAAGGACGAGTACTTCGCCGTGGCCGCGGAG
AACGAGCAGGAGCAGGAGGGCTGGTACCGCGCGCTCACCGACCTGGTCAGCGAGGGCCGCGCGGCCGCGGAGAC
GCGCCCCCGCCGCCGCGCCGCGCGTCTGCAGCGCCTCCCTGCCCGCGCCCTGGGCGGCTCTGCCGGCGCC
GCCGGGGCCGAGGACAGCTACGGGCTGGTGGCTCCCGCCACGGCCGCTACCGTGAGGTGTGGCAGGTGAACCTG
AAGCCCAAGGGTCTGGGCCAGAGCAAGAACCTGACGGGGGTGTACCGTCTGTGCCTGTCTGCGCGCACCATCGGC
TTCGTGAAGCTCAACTGCGAGCAGCCGTGGTGACGCTGCAGCTCATGAACATCCGCCGTGCGGCCACTCGGAC
AGCTTCTTCTCATCGAGGTGGGCCGCTCGGCCGTACAGGCCCCGCGAGCTGTGGATGCAGGCGGACGACTCG
GTGGTGGCGCAGAACATCCACGAGACCATCTGGAGGCCATGAAGGCGCTCAAGGAGCTCTTCGAGTTCCGGCCG
CGCAGTAAGAGCCAATCGTCGGGGTCTGTCGGCCACGACCCCCATCAGCGTCCCCGGCGCGCGCCGCCACCACCAC
CTGGTCAACCTGCCCCCAGCCAGACGGGCTGGTGCGCCGCTCGCGCACCGACAGCTGGCCGCCACCCCGCCG
GCGGCCAAGTGACGCTCGTGCCGGGTGCGCACCGCCAGCGAGGGCGACGGCGGCCGGGCTGCGGGAGCGGCGGCC
GCGGCGCAGAGGCTGGTGTGCGTGGTGGGAGCCCCCTGAGCCCCGGGCCGGTGCAGCGCGCCCTGAGCCGCTCG
CACACCCTGAGCGGCGGCTGCGGGCGCCGCGGGAGCAAGGTGGCGCTGCTGCCGGCAGGGGGCGCGCTGCAACAC
AGCCGCTCCATGTCCATGCCCGTGGCGCACTCGCCGCCCGCCGCCACCAGCCCCGGCTCCCTGTCTCGTCCAGCAGC
GGCCACGGCTCGGGCTCCTACCCGCCGCCGCCCGGCCGCCACCCGCTCTGCCGCATCCGCTGCACCACGGCCCC
GGCCAGCGGCCCTCCAGCGGCAGCGCCTCCGCTCGGGCTCCCCCAGCGACCCCGGCTTCAATGTCCCTGGACGAG
TACGGCTCCAGCCCAGGCGACCTGCGCGCCTTCTGCAGCCACCGAAGCAACACGCCCCAGTCCATCGCGGAGACG
CCCCCGCCCCGAGACGGCGGCGGCGGCGGTGAGTTCTACGGGTACATGACCATGGACAGGCCCTGAGCCACTGT
GGCCGCTCCTACCGCCGGGTCTCGGGGGACGCGGCCAGGACCTGGACCGAGGGCTGCGCAAGAGGACCTACTCC
CTGACCACGCCAGCCCGGCAGCGGCCGGTGGCCAGCCCTCCTCTGCCTCGCTGGATGAATACACCCTGATGCGG
GCCACCTTCTCGGGCAGCGCGGGCCGCTCTGCCCGTCTGCCCCGCGTCTCTCCCAAGGTGGCTACCACCCC
TACCCAGAGGACTACGGAGACATCGAGATCGGCTCCACAGGAGCTCCAGCAGCAACCTGGGGGCAGACGACGGC
TACATGCCCCATGACGCCCCGCGCGGCCCTTCGCGGGCAGTGGGAGCGGCAGCTGCAGGAGCGACACTACATGCCC
ATGAGCCCCGCCAGCGTGTCCGCCCCCAAGCAGATCTTGACGCCAGGGCCGCCGCCGCCGCCGCCCGCTG
CCTTCTGCGGGGCTGCGGGGCCAGCACCCACCTCTGCGGCGGGCAGGACATTCCCGGCGAGCGGGGGCGGCTAC
AAGGCCAGCTCGCCCGCCGAGAGCTCCCCGAGGACAGTGGGTACATGCGCATGTGGTGGGTTCCAAGCTGTCC
ATGGAGCATGCAGATGGCAAGCTGCTGCCAACGGGACTACCTCAACGTGTCCCCAGCGACGCGGTACCACG
GGCACCCCGCCCGACTTCTTCTCCGACGCCCTGCACCCGGCGGGGAGCCGCTCAGGGGCGTTCCCGGCTGCTGC
TACAGCTCCTTGCCCCGCTCCTACAAGGCCCCCTACACCTGTGGCGGGGACAGCGACCACTAGCTGCTCATGAGC
TCCCCCGTGGGGCGCATCCTGGAGGAGGAGCGTCTGGAGCCTCAGGCCACGCCAGGGGCCAGCCAGGCGGCCAGC
GCCTTCGGGGCGGCCCCACGACGCCCTCACCCTGTAGTGCCCTTCGCCCCGTGCGGCGTAGCGGCCGCCGGTCA
GGTTTCTTGGGCCAGCGCGGCCGGGCGGTGAGGCCACGCGCCTGTCCCTGGAGGGGCTGCCAGCCTGCCAGC
ATGCACGAGTACCCACTGCCACGGAGCCCAAGAGCCCCGGCGAGTACATCAACATCGACTTTGGCGAGCCCGGG
GCCCCCTGTGCGCCCGCCGCGCTCCCTGCTGGCGTGGCGGCCCTCGTCTCTCGCTCTTGTCCGCCAGCAGC
CCGGCCTCGTCTGGGCTCAGGCACCCCGGGCACCAGCAGCGACAGCCGGCAGCGGTCTCCGCTCTCCGACTAC
ATGAACCTCGACTTCAGCTCCCCCAAGTCTCCTAAGCCGGGCGCCCCGAGCGGCCACCCCGTGGGCTCCTTGGAC
GGCCTCCTGTCCCCCGAGGCCTCCTCCCGTATCCGCCGTTGCCCCCGCGTCCGTCCGCGTCCCGTCTGCTGCT

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FIGURE 621B

CTGCAGCCGCCGCCACCGCCGCCGCCCCGGGGGAGCTGTACCGCCTGCCCCCGCCTCGGCCGTTGCCACCGCC
CAGGGCCCCGGGCGCCGCTCATCGTTGTCTCTCGGACACCGGGGACAATGGTGA CTACACCGAGATGGCTTTTGGT
GTGGCCGCCACCCCGCCGCAACCTATCGCGGCCCCCGAAGCCAGAAGCTGCCCCGCTGGCCAGCCCCGACGTCG
GGCGTGAAGAGGCTGAGCCTCATGGAGCAGGTGTGGGAGTCGAGGCCTTCTGCAGGCCAGCCAGCCCCGGAC
CCCCACCGCGGCGCCAAGGTATCCGCGCAGACCCGCAGGGGGGCCGCCGCCACAGTTCCGAGACCTTCTCC
TCCACCACGACGGTCACCCCGTGTCCCGCTCTTCGCCCCACAACCCCAAGCGCCACAACCTCGGCCTCCGTGGAA
AATGTCTCTCTCAGGAAAAGCAGCGAGGGCGGCGTGGGTGTGCGCCCTGGAGGGGGCGACGAGCCGCCACCTCC
CCACGACAGTTGCAGCCGGCGCCCCCTTTGGCACCGCAGGGCCGGCCGTGGACCCCGGGTCAGCCCGGGGGCTTG
GTCGGTTGTCTTGGGAGCGGTGGATCGCCCATGCGCAGAGAGACCTCTGCCGGCTTCCAGAATGGTCTCAACTAC
ATCGCCATCGACGTGAGGGAGGAGCCCGGGCTGCCACCCAGCCGCAGCCGCCGCCGCCGCTTCTCAGCCG
GGAGACAAGAGCTCCTGGGGCCGGACCCGAAGCCTCGGGGGTCTCATCAGCGCTGTGGGCGTCGGCAGCACCGGC
GCGGGGTGCGGGGGGCCGGGTCCCGGTGCCCTGCCCCCTGCCAACACCTACGCCAGCATTGACTTCTTGTCCAC
CACTTGAAGGAGGCCACCATCGTGAAAGAGTGAAGATCTGTCTGGCTTTATCACCAGGATGTACATGTCAGAGA
ATATCATTAAGAAGACGCTCAGCGCTGTTTACGCCGAAGCTGCTTGCAGTTTTCTTTGGATCTGAGCAATG
ACTGTGTTTGGAAACATCTGTGGACTCTGATAGATGGGGCACAACAAGGCAAGGTCACCTGCCTCTTCCCTTGT
TCCCGGATGGGCATTTCATCATTGTGCTGTTTGCCTTTGTTTGTGTTTTAACAAAATTAGCTGAAGAAGTT
ATTCTCAAGAAAATTGGATGTTTTATTGGCCTTCTTAAATTGTGGCCAGTGTCTTTAATTTCTTCTTTTC
CTTTTGGCAAAGCAGATATAACCCTCAGCATGCTAGGAGAGTGCACCCGTACCTATGGAAGTGGTAAAATCTGGT
ATTTACTGGCTTACACTCAAACGACCACAGTCCTACCTCAGTTCAAGGTAAAGCCGGATTTCCGTGGCGGGGGT
CCACAGGACCTCCTGTAGTAGCCCTGCGCTGTGTGTCTGGAGCGCGTCTCGCCTTATTTAAATGGTCCAGTAG
ACAGCTGCTTGTGGATTCCAGTGCAGGTACCTGCGATGTTTACGTCCACACCGAGCCAGTGTGGGACTGACAT
TTCTCAATGGAAGTGAAATTTGGGATTGGACTTTGAAGACGATTACTAAATAATAATTATTATATGTAAGTGAAG
CAACCTACTTTTGAAGTCAACTGTATTGGGTAGTGGGAGGTGGGAGGGAAGGGCTTTGGGAAGGGGATGAATAT
CTCTTTTACCTTTAACAGACTTGTTTAATCTTCTCGATGTAGATGTTTATGTAGGTACTTCACATTGCAACGC
CTTTTATTCTATTTACAAGCTCAGATGTCTCTGCTCTCTGAATCTTGGGCATGCCTTTCTGTAAACAAAAATCC
CTGTAGGCGTGTAGCAATTCCAGGGTGGTCCGGGTTTGGCAGATTTGATTTTTAAAAAATGTATTATCTTTAAT
AAAAATGTTATTATGTCAACAGTGAGGCTGCCCTGAACAAAAAAGCAAAAAAGAAAAAAGGAAAGA
AAGAAACTGATAAAAGAGGCATCCAGCCCTATGTTATTGATGGAAAAAGAAAAAGAAAGCAATCTCGCA
GTACATGTTACTTGTGAAAAAATTCGGGACAAGACTACCTTGTTTTATGTTTTAGTATTCTGAAAAATACCAG
TGTGTGGCAGTTCTCGCAGATGTTACCTAAAACCTGCTGAACCTGACCGGCAGAATGTTCTGCCGTTTTCTGCTCC
CTCGACACTTGATTGGAGGGCTGTGACCTCTCCTCCCGTGGGGGCTTCCCCAGTGCCTATCTTCTCTGATAGTC
ATGGAGAGGTTACACTAATTCATTGGAGATGTAAGTTGTTGGTTTTGTTTTGTTTTGTTTTAGAAAAATATATA
TAAATATATAATAGATATCTATCGCTATAGAATAATGCATTAATAAAATGAGGCTTTTTTAGAGGAAGACCAAAA
AATTCATGTCTTAAAAATATATTTAATGGCAATGCAAAAGTCTTCTGCTTCCGTGCTGAACCTTTAGAACAGAG
GATTGTATTGCAAGACAAAGTTGAATGTAAAGTGATCTCCCTGAACATTTTTAAGGTTTTACTTTTCTGAAATTA
TACATCACAGCAGTGCATAGGCCATATAATGTTAGCTGGAAGGTCAATTCAGTGTATGATATACTTTATTAAGA
TGTATAAAACATCCTGAAGTTTTTATTAGTTTTGGGAATAGGCATCAGTGGGTGGTATTTGCTTTGTAACCTCCC
CCCAGGTACGATAGGGACTGAATATGGACCCTGCTGAAAGCAGTGTATTGACGCATATTTAACTCGCCCTCTATC
CGTAGAGTAGTCATGACACTATACAGATGGTTTCGTGTTTACTGTCAGCTTAAACAAGCAAAATACACAGATGA
TAATATGCTAAATTTTCTCTATCCTGTACATTTTCAAAAAAGGCATATGCAATATTTACATTTTAAATTTAGTT
TACAGAATGGAACCAAAATGTATAAATGTTATGTTTGCTAAACTTCAATGTATATTGGGTCTTTGTACATTT
TGCTGACTTACCTTAAATTTAAATATTTTTTGTATATAAACTTAAACAGTTATTAAACAGTGTCTTTCTTTT
GGGTACGTATTGTTTCTGGATATCAAGATGTTAAATATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTT
ATCTTGCTCTGTCTTCCACTGTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGG
ACTAGAATAGTGCAATTGATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCAATAAAATAAA
GTACATTATTTATGAAATGAA

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FIGURE 622

MASPPRHGPPGPASGDGPNLNNNNNNNNHNSVRKCGYLRNEEHGHRFFVLRGPGAGGDEATAGGGSAPQPPRLE
YYESEKKWRSKAGAPKRVIALDCCLNINKRADAKHKYLIALYTKDEYFAVAAENEQEQEGWYRALTDLVSEGRAA
AGDAPPAAPAAASCSASLPGALGGSAGAAGAEDSYGLVAPATAAYREVWQVNLKPKGLGQSKNLTGVYRLCLSAR
TIGFVKLNCEQPSVTIQLMNIRRCGHSDSFFFIEVGRSAVTGPGELWMQADDSVVAQNIHETILEAMKALKELFE
FRPRSKSQSSGSSATHPI SVPGARRHHHLVNLPPSQTGLVRRSRTDSLAAATPPAAKCSSCRVRTASEGDGGRAAG
AAAAAQRLVSVAGSPLSPGPVRAPLSRSHTLSGGCGGRGSKVALLPAGGALQHSRSMMPVAHSPPAATSPGSL
SSSGHSGSYPPPPGPHPLPHPLHHGPGQRPSSGSASASGSPSDPGFMSLDEYGSSPGDLRAFCSHRSNTPESI
AETPPARDGGGGGEFYGYMTMDRPLSHCGRSYRRVSGDAAQDLDRGLRKRTYSLTTPARQRPVQPSSASLDEYT
LMRATFSGSAGRLCP SCPASSPKVAYHPYPEDYGDIEIGSHRSSSNLGADDGYMPMTPGAAGAGSGSGSCRSD
YMPMSPASVSAPKQILQPRAAAAAAAVPSAGPAGPAPTSAGRTFPASGGGYKASSPAESSPEDSGYMRMWCGS
KLSMEHADGKLLPNGDYLVNSPDAVTGTGTPDFFSAALHPGGEPLRGVPGCCYSSLPRSYKAPYTCGGDSQYV
LMSSPVGRILEEERLEPQATPGPSQAASAFGAGPTQPPHPVVPSPVRRSGRRSGFLGQRGRAVRPTRLGLEGLPS
LPSMHEYPLPPEPKSPGEYINIDFGEPGARLSPPAPLLASAASSSSLLSASSPASSLGSCTPGTSSDSRQSRPL
SDYMNLD FSSPKSPKPGAPSGHPVGSGLDGLLSPEASSPYPLPPRPSASPSSSLQPPPPPPAPGELYRLPPASAV
ATAQGPAAASSLSSDTGDNGDYTEMAFGVAATPPQPIAAPPKPEARVASPTSGVKRLSLMEQVSGVEAFLOASQ
PPDPHRGAKVIRADPQGGRRRHSSETFSSTTTVTPVSPSFAHNPKRHNSASVENVSLRKSSEGGVGVPGGGDEP
PTSPRQLQAPAPPLAPQGRPWTPGQPGGLVGCPGSGGSPMRRETSAGFQNGLYIAIDVREEPGLPPQPQPPPPPL
PQPGDKSSWGRTRSLGGLISAVGVGSTGGGCGGPGPGALPPANTYASIDFLSHHLKEATIVKE

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FIGURE 623

GTCAACCAGTGAGGCTGCCCTGAACAAAAAAAAACAAAAGAAAAAAAAAAAAAAAAAGGAAAGAAAGAAACTGATAA
AAAGAGGCATTCCAGCCCCATGTTATTGATGGAAAAAGAAAAAGAAAGCAATCTCGCAGTACATGTTACT
TGTGAAAAAATCCGGACAAGACTACCCTTGTTTTATGTTTTTCAGTATTCTGAAAATACCAGTGTGTGGCAGTTC
TCGCAGATGTTACCTAAACTGCTGAACTTGACCGGCAGAAATGTTCTGCCGTTTTCTGCTCCCTCGACACTTGAT
TGGAGGGCTGTCGACCTCTCCTCCCGTGGGGGCTTCCCCAGTGCCTATCTTCTCTGATAGTCATGGAGAGGTTAC
ACTAATTCATTGGAGATGTAAGTTGTTGGTTTTGTTTTGTTTTGTTTTTAGAAAAATATATATAAATATATAATA
GATATCTATCGCTATAGAATAATGCATTAATAAAATGAGGCTTTTTTAGAGGAAGACCAAAAAATTCAATGTCTT
AAAAATATATTTAATGGCAATGCAAAAGTCTTCCTGCTTCCGTGCTGAACTTTAGAACAGAGGATTGTATTGCAA
GACAAAGTTGAATGTAAAGTGATCTCCCTGAACATTTTTAAGGTTTTACTTTTCTGAAATTATACATCACAGCAG
TGCATAGGCCATATAATGTTAGCTGGAAGGTCAATTTTCAGTGTATGATATACTTTATTAAGATGTATAAAACATC
CTGAAGTTTTTATTTAGTTTTGGGAATAGGCATCAATGGGTGGTATTTGCTTTGTAACCCCCAGGTACGATA
GGGACTGAATATGGACCCCTGCTGAAAAGCAGTGTATTGACGCATATTTAACTCGCCCTCTATCCGTAGAGTAGTC
ATGACACTATACAGATGGTTCGTGTTTCACTGTCAGCTTAAACAAGCAAAATACACAGATGATAATATGCTAAA
TTTTCTCTATCCTGTACATTTACAAAAAGGCATATGCAATATTTACATTTTTAATTTAGTTTACAGAATGGAA
CCAAAATGTATAAATGTTATGTTTGCTAAACTTCACAATGTATATTGGGTCTTTGTACATTTTGCCCTGACTTA
CCTTAAATTTAAATATTTTTTGCTATATAAACTTTAACAGTTATTAAACAGTGTTCCTTTTTGGGTACGTATT
GTTTCTGGATATCAAGATGTTAAATATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTTATCTTGCTCTG
TCTTCCACTGTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGGACTAGAATAGT
GCATTGTATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCAATAAAATAAAGTACATTATTT
ATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 624A

GGGTGATTACGCGCCCGCGAGGCGGAACGGGCCGCAAGAGGAGGAGGGGAGAGCCCGTCCGCGCCTGGGGCTCCC
GGGGTGGCACGAGCCCGCGCCGCGGAGTGCGAGGCGGAGGCGAGGAGGCCGCGGGGACGGGAGGCGAGGCCGGCCG
GGCCCCGAAGCCATGGGAGAACGCGCACACCAAGACGGTGGAGGAGGTGCTGGGGCCACTTCGGCGTCAACGAGAG
TACGGGGCTGAGCCTGGAACAGGTCAAGAAGCTTAAGGAGAGATGGGGCTCCAACGAGTTACCGGCTGAAGAAGG
AAAAACCTTGCTGGAACCTTGCTGATTGAGCAGTTTGAAGACTTGCTAGTTAGGATTTTATTACTGGCAGCATGTAT
ATCTTTTGTGGCTTGGTTTGAAGAAGGTGAAGAAACAATTACAGCCTTTGTAGAACCTTTTGTAAATTTTACT
CATATTAGTAGCCAATGCAATTGTGGGTGTATGGCAGGAAAGAAATGCTGAAATGCCATCGAAGCCCTTAAGGA
ATATGAGCCTGAAATGGGCAAAGTGTATCGACAGGACAGAAAGAGTGTGCAGCGGATTAAAGCTAAAGACATAGT
TCCTGGTGATATTGTAGAAATTGCTGTTGGTGACAAAGTTCTGCTGATATAAGGTTAACTTCCATCAAATCTAC
CACACTAAGAGTTGACCAGTCAATTCTCACAGGTGAATCTGTCTGTGCATCAAGCACACTGATCCCGTCCCTGA
CCCACGAGCTGTCAACCAAGATAAAAAGAACATGCTGTTTTCTGGTACAAACATTGCTGCTGGGAAAGCTATGGG
AGTGGTGGTAGCAACTGGAGTTAACACCGAAATTGGCAAGATCCGGGATGAAATGGTGGCAACAGAACAGGAGAG
AACACCCCTTCAGCAAAACTAGATGAATTTGGGGAACAGCTTTCCAAAGTCATCTCCCTTATTTGCATTGCAGT
CTGGATCATAAATATTGGGCACCTTCAATGACCCGGTTCATGGAGGGTCTGGATCAGAGGTGCTATTTACTACTT
TAAATTTGCAGTGGCCCTGGCTGTAGCAGCCATTCTGAAGGTCTGCCTGCAGTCATCACCACCTGCCTGGCTCT
TGGAATCGCAGAATGGCAAAGAAAATGCCATTGTTGGAAGCCTCCCGTCTGTGGAAACCCTTGGTTGTACTTC
TGTTATCTGCTCAGACAAGACTGGTACACTTACAACAAACCAGATGTCAGTCTGCAGGATGTTTATTCTGGACAG
AGTGAAGGTGATACTTGTTCCTTAATGAGTTTACCATAACTGGATCAACTTATGCACCTATTGGAGAAGTGCA
TAAAGATGATAAACAGTGAATTGTCACCAGTATGATGGTCTGGTAGAATTAGCAACAATTTGTGCTCTTTGTAA
TGACTCTGCTTTGGATTACAATGAGGCAAAGGGTGTGTATGAAAAAGTTGGAGAAGCTACAGAGACTGCTCTCAC
TTGCCTAGTAGAGAAGATGAATGTATTTGATACCGAATTGAAGGGTCTTTCTAAAATAGAACGTGCAAATGCCTG
CAACTCAGTCATTAAACAGCTGATGAAAAAGGAATTCACCTAGAGTTTTTACGTGACAGAAAGTCAATGTCGGT
TTACTGTACACCAAATAAACCAAGCAGGACATCAATGAGCAAGATGTTTGTGAAGGGTGCTCCTGAAGGTGTCAT
TGACAGGTGCACCCACATTCGAGTTGGAAGTACTAAGGTTTCTATGACCTCTGGAGTCAAACAGAAGATCATGTC
TGTCATTGAGAGTGGGGTAGTGGCAGCGACACACTGCGATGCCTGGCCCTGGCCACTCATGACAACCCACTGAG
AAGAGAAGAAATGCACCTTGAGGACTCTGCCAACTTTATTAAATATGAGACCAATCTGACCTTCGTTGGCTGCGT
GGGCATGCTGGATCCTCCGAGAATCGAGGTGGCCTCCTCCGTGAAGCTGTGCCGGCAAGCAGGCATCCGGGTCTAT
CATGATCACTGGGGACAACAAGGGCACTGCTGTGGCCATCTGTGCGCCGATCGGCATCTTCGGGCAGGATGAGGA
CGTGACGTCAAAAGCTTTTACAGGCCGGGAGTTTGATGAAGTCAACCCCTCCGCCAGCAGACGCCTGCCTGAA
CGCCCGCTGTTTTGCTCGAGTTGAACCCTCCACAAGTCTAAAATCGTAGAATTTCTTCACTCTTTTGATGAGAT
TACAGCTATGACTGGCGATGGCGTGAACGATGCTCCTGCTCTGAAGAAAGCCGAGATTGGCATTGCTATGGGCTC
TGGCACTGCGGTGGCTAAAACCGCCTCTGAGATGGTCTGGCGGATGACAACTTCTCCACCATTGTGGCTGCCGT
TGAGGAGGGGGCGGGCAATCTACAACAACATGAACAGTTCATCCGCTACCTCATCTCGTCCAACGTCGGGGAAGT
TGCTGTATTTTCTGACAGCAGCCCTTGGATTTCCCGAGGCTTTGATTCTGTTCACTGCTCTGGGTCAATCT
GGTGACAGATGGCCTGCCCTGCACTGAGGTTCAACCCCTCTGATCTGGACATCATGAATAAACCTCCCGG
GAACCCAAAGGAACCATGATCAGCGGGTGGCTCTTTTTCCGTTACTTGGCTATTGGCTGTTACGTCGGCGCTGC
TACCGTGGGTGCTGCTGCATGGTGGTTCATTGCTGCTGACGGTGGTCCAAGAGTGTCTTCTACCAGCTGAGTCA
TTTCTTACAGTGTAAGAGGACAACCCGGACTTTGAAGGCGTGGATTGTGCAATCTTTGAATCCCCATACCCGAT
GACAATGGCGCTCTCTGTTCTAGTAACTATAGAAATGTGTAACGCCCTCAACAGCTTGTCGAAAACAGTCTCT
GCTGAGGATGCCCCCTGGGAGAACATCTGGCTCGTGGGCTCCATCTGCCTGTCCATGTCACTCCACTTCCTGAT
CCTCTATGTCGAACCTTGCCACTCATCTTCCAGATCACACCGCTGAACGTGACCCAGTGGCTGATGGTGTGCTGAA
AATCTCCTTGCCCGTGATTCTCATGGATGAGACGCTCAAGTTTGTGGCCCGCAACTACCTGGAACCTGGTAAAGA
GTGTGTGCAGCCTGCCACCAATCCTGCTCGTTCTCGGCATGCACCGATGGGATTTCCTGGCCGTTTGTGCTGCT
CATAATGCCCTGGTGATCTGGGTCTATAGCACAGACACTAACTTTAGCGATATGTTCTGGTCTTGACTGACAGT
TTTCCATAAAGAAGATGTTTAACTTAATCAATTAATTTTTTTTATTGTTTAAAGCAACTGTCTATTTCTGCTGAAT
TTTACATGAACATACTGGCTGGTGTGATGGAGTTTCATACTCTAGATTTTGTGTTTCTGTTTCTGACTCCAGTGG
GGCAAGATTTTCTTTTTTATACACATAATTAAGTGTCCATTGACATGTACAGAGAACTAACACTATTTTATGC
AAATATTTTTTTGTAGATGAAAAAGCATGTACAGTGTCTGTTTAAATACTCATCTTGTATAAAAAAATAGTTG

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FIGURE 624B

AGCCAGCAGACATTGTCAGCAAATTAATTGGCAGCAGATTTTAGGAAATGAATGTGTGTGGTTTTTTTTCTAAAA
CTAAATAGCATGTATTGTGTCTTTTGCATGATGATCCGGATTTAATTTGATATCACAGTCTAATTTTTATTCTATA
AGCCAATTTTTCTGCACTGAGCAGAGTCTTGCTACCTCAGTCAGTATTGTTTTGGTTTGCTACTTCCCTCACCCA
CTTTGGCCTCCGTTACCCCCACCCACCCACCTCTCCCCACCTTACCCCCGCCCCGCTTGGCTTCTTCTTTAGG
ATTGTGATGGTTCGTTCTGTTTACATCAGTTTTAACGAGAGGTATGCCTGTACTCGCTTGTGCAGAAAACATTGT
TCCAGATTCAATCGACTGGGTTTATGTCCCTTCACATAGTTTTTAAGGTTATTTATTTAAATGTCTAATGTATTT
TATTGTAACAGACATTGTTTTGCCAACATTGCCTATTTTCAGTGGCACGTCATCTAGTTTTAAAAAATAAACAT
TTTAAAAAG

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FIGURE 625

MENAHKTVEEVLGHFGVNESTGLSLEQVKKLKERWGSNELPAEEGKTLLLELVIEQFEDLLVRILLLAACISFVL
AWFEEGEETITAFVEPFVILLILVANAIVGVWQERNAENAIEALKEYEPEMGKVYRQDRKSVQRIKAKDIVPGDI
VEIAVGDKVPADIRLTSIKSTTLRVDQSILTGESVSVIKHTDPVPDPRAVNQDKKNMLFSGTNIAAGKAMGVVVA
TGVNTEIGKIRDEMVAEQERTPLQQKLDEFGEQLSKVISLICIAVWIINIGHFNDPVHGGSWIRGAIYYFKIAV
ALAVAAIPEGLPAVITTCLALGTRMAKKNAIVRSLPSVETLGCTSVICSDKTGTLLTNQMSVCRMFIILDRVEGD
TCSLNEFTITGSTYAPIGEVHKDDKPVNCHQYDGLVELATICALCNDSDALDYNEAKGVYEKVGEEATETALTCLVE
KMNVFDTELKGLSKIERANACNSVIKQLMKKEFTLEFSRDRKSMSVYCTPNKPSRTSMKMFVKGAPEGVIDRCT
HIRVGSTKVPMTSGVKQKIMSVIREWGS GSDTLRCLALATHDNPLRREEMHLED SANFIKYETNLTFVGCVGMLD
PPRIEVASSVKLCRQAGIRVIMITGDNKGTAVAICRRIGIFGQDEDVTSKFTGREFDELNPSAQRDACLNARCF
ARVEPSHKSKIVEFLQSFDEITAMTGDGVNDAPALKKAEIGIAMGSGTAVAKTASEMVLADDNFSTIVA AVEEGR
AIYNNMKQFIRYLISNVGEVVCIFLTAALGFPEALIPVQLLWVNLVTDGLPATALGFNPPDLDIMNKPPRNPKE
PLISGWLFFRYLAIGCYVGAATVGAAAWWFIAADGGPRVSFYQLSHFLQCKEDNPDFEGVDCAIFESPYPMTMAL
SVLVTIEMCNALNSLSENQSLRMPPWENIWLVGSI CLSMLHFLILYVEPLPLIFQITPLNVTQWLMVLKISLP
VILMDETLKFVARNYLEPGKECVQPATKSCSF SACTDGISWPFVLLIMPLVIWVYSTDTNFS DMFWS

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FIGURE 626

GAGGAGGCCCCGAGAGGAGTCGGTGGCAGCGGCGGGCGGGACCGGCAGCAGCAGCAGCAGCAGCAACC
ACTAGCCTCCTGCCCCGCGGCGTTGCGACGAGCCCCACGAGCCGCTCACCCGCGCGTTCTCAGCGCTGCCCCGACC
CCGCTGGCGCGCCTCCCGCCGAGTCCCGGCAGCGCCTCAGTTGTCTCCGACTCGCCCTCGGCCTTCGCGCAGC
GCAGCACAGCCGCACGCACCGCAGCACAGCACAGCACAGCCAGGCATAGCTTCGGCACAGCCCCGGCTCCGGCT
CCTGCGGCAGCTCCTCTGGCACGTCCCTGCGCCGACATTCTGGAGGTTGGATGCTCTTGTCCAAAATCAACTCGC
TTGCCCACCTGCGCGCCGCGCCCTGCAACGACCTGCACGCCACCAAGCTGGCGCCCGGCAAGGAGAAGGAGCCCC
TGGAGTCGCGAGTACCAGGTGGGCCCGCTACTGGGCAGCGGCGGCTTCGGCTCGGTCTACTCAGGCATCCGCGTCT
CCGACAACTTGCCGGTGGCCATCAAACACGTGGAGAAAGGACCGGATTTCGACTGGGGAGAGCTGCCTAATGGCA
CTCGAGTGCCCATGGAAGTGGTCCTGCTGAAGAAGGTGAGCTCGGGTTTCTCCGGCGTCATTAGGCTCCTGGACT
GGTTCGAGAGGCCCCGACAGTTTCTGTCCTGATCCTGGAGAGGCCCCGAGCCGGTGCAAGATCTCTTCGACTTCATCA
CGGAAAGGGGAGCCCTGCAAGAGGAGCTGGCCCCGAGCTTCTTCTGGCAGGTGCTGGAGGCCGTGCGGCACTGCC
ACAACTGCGGGGTGCTACACCGCGACATCAAGGACGAAAACATCCTTATCGACCTCAATCGCGGCGAGCTCAAGC
TCATCGACTTCGGGTGCGGGGCGCTGCTCAAGGACACCGTCTACACGGACTTCGATGGGACCCGAGTGTATAGCC
CTCCAGAGTGGATCCGCTACCATCGCTACCATGGCAGGTGCGCGGCAGTCTGGTCCCTGGGGATCCTGCTGTATG
ATATGGTGTGTGGAGATATTCCTTTTCGAGCATGACGAAGAGATCATCAGGGGCCAGGTTTTCTTCAGGCAGAGGG
TCTCTTCAGAATGTCAGCATCTCATTAGATGGTGTCTTGGCCCTGAGACCATCAGATAGGCCAACCTTCGAAGAAA
TCCAGAACCATCCATGGATGCAAGATGTTCTCTGCCCCAGGAACTGCTGAGATCCACCTCCACAGCCTGTGCG
CGGGGCCAGCAAATAGCAGCCTTTCTGGCAGGTCTCCCTCTCTTGTGTCAGATGCCCGAGGGAGGGGAAGCTTC
TGCTCCAGCTTCCCGAGTACCAGTGACACGTCTCGCCAAGCAGGACAGTGCTTGATACAGGAACAACATTTACA
ACTCATTCCAGATCCCAGGCCCCCTGGAGGCTGCCTCCCAACAGTGGGGAAGAGTGACTCTCCAGGGGTCTAGGC
CTCAACTCCTCCCATAGATACTCTCTTCTCTCATAGGTGTCCAGCATTGCTGGACTCTGAAATATCCCGGGGT
GGGGGGTGGGGGTGGGCAGAACCCTGCCAATGGAACCTTTCTTCATCATGAGTTCTGCTGAATGCCGCGATGGG
TCAGGTAGGGGGGAAACAGGTTGGGATGGGATAGGACTAGCACATTTTAAGTCCCTGTACCTCTTCCGACTCTT
TCTGAGTGCCTTCTGTGGGGACTCCGGCTGTGCTGGGAGAAATACTTGAACCTGCCTCTTTTACCTGCTGCTTCT
CCAAAAATCTGCCTGGGTTTTGTTCCTATTTTTCTCTCCTGTCTCCCTCACCCCTCCTTCATATGAAAGGTG
CCATGGAAGAGGCTACAGGGCCAAACGCTGAGCCACCTGCCCTTTTTTCTGCCTCCTTTAGTAAAACTCCGAGTG
AACTGGTCTTTCCTTTTTGGTTTTTACTTAACTGTTTCAAAGCCAAGACCTCACACACACAAAAAATGCACAAAC
CAAGCAATCAACAGAAAAGCTGTAAATGTGTGTACAGTTGGCATGGTAGTATACAAAAAGATTGTAGTGGATCTA
ATTTTTAAGAAATTTGCGTTTTAAGTTATTTTACCTGTTTTGTTTTCTTGTGTTTTGAAAGATGCGCATTCTAACCT
GGAGGTCAATGTTATGTATTTATTTATTTATTTATTTGGTTCCCTTCCTATTCCAAGCTTCCATAGCTGCTGCCC
TAGTTTTCTTTCTCCTTTCTCCTCTGACTTGGGGACCTTTTGGGGGAGGGCTGCGACGCTTGCTCTGTTTGTG
GGGTGACGGGACTCAGGCGGGACAGTGCTGCAGCTCCCTGGCTTCTGTGGGGCCCTCACCTACTTACCCAGGTG
GGTCCCGGCTCTGTGGGTGATGGGAGGGGCCATTGCTGACTGTGTATATAGGATAATTATGAAACACAGTTCTGG
ATGGTGTGCTTCCAGATCCTCTCTGGGGCTGTGTTTTGAGCAGCAGGTAGCCTGCTGGTTTTATCTGAGTGAAA
TACTGTACAGGGGAATAAAAGAGATCTTATTTTTTTTTTATACTTGCCTTTGGAATAAAAACCTTTGGCTTT

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FIGURE 627

MLLSKINSLAHLRAAPCNDLHATK LAPGKEKEPLESQYQVGPELLGSGGFGSVYSGIRVSDNLPVAIKHVEKDRI
DWGELPNGTRVPMEVVLLKKVSSGFSGVIRLLDWFERPDSFVLILERPEPVQDLDFITERGALQEELARSFFWQ
VLEAVRHCHNCGVLHRDIKDENILIDLNRGELKLIDFGSGALLKDTVYTDGTRVYSPPEWIRYHRYHGRSAAV
WSLGILLYDMVCGDIPFEHDEEIRGQVFFRQRVSSCQH LIRWCLALRP SDRPTFEEIQNHPWMQDVLLPQETA
EIHLSLSPGPSK

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FIGURE 628

GTTTGTGGCTGCGGCAGCAGGTAGCAAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGA
ACCAGCGGTTACCAATGGAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTA
TGACTCCATGAAGGAACCCCTGTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCCACCATCTACTC
CATCATCTTCTTAACTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAAACTGAGAAG
CATGACGGACAAGTACAGGCTGCACCTGTCACTGGCCGACCTCCTCTTTGTATCACGCTTCCCTTCTGGGCAGT
TGATGCCGTGGCAAACCTGGTACTTTGGGAACCTCCTATGCAAGGCAGTCCATGTATCTACACAGTCAACCTCTA
CAGCAGTGTCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAG
GCCAAGGAAGCTGTTGGCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGA
CTTCATCTTTGCCAACGTCAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGT
GGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTCATCCTGTCTGCTATTGTCAT
TATCATCTCCAAGCTGTCACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCT
GGCTTCTTCGCCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAAATCATCAA
GCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTCATCACCAGGGCCCTAGCTTTTCTTCCACTGTTG
TCTGAACCCCATCCTCTATGCTTTCCTTGGAGCCAAATTTAAACCTCTGCCACGACGCACTCACCTCTGTGAG
CAGAGGGTCCAGCCTCAAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTCATCTGTTTCCACTGAGTCTGAGTC
TTCAAGTTTTCACTCCAGCTAAACACAGATGTAAAAGACTTTTTTTTATACGATAAATAACTTTTTTTTAAAGTTAC
ACATTTTTTCAGATATAAAAGACTGACCAATATTGTACAGTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCT
TTAGTTTTTGTGAAGTTTAATTGACTTATTTATATAAAATTTTTTTTGTTCATATTGATGTGTGTCTAGGCAGGA
CCTGTGGCCAAGTTCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGT
GTAGTGAATCACGTAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGAACGT
TTTTCTGTCTTAAAGACGTGATTTTGTCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATG
CTGGTTTTTCAGTTTTTCAGGAGTGGGTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAGTTGTTAATAAA
AGTACATGTTAAACTTACTTAGTGTATG

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FIGURE 629

MEGISIYTS DNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSMTDK
YRLHLSVADLLFVITLPFWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLDRYLAIVHATNSQRPRKL
LAEKV VYVGWIPALLLTIPDFIFANVSEADDRYICDRFY PNDLWVVVFQFHIMVGLILPGIVILSCYCIISK
LSHSKGHQKRKALKTTVILILAFFACWLPYYIGISIDSFILLEI IKQCEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKFKTSAQHALTSVSRGSSLKILSKGKRGGHSSVSTESESSSFHSS

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FIGURE 630

GAGCTAGCTTTGCAAT**ATGG**CGGCCGAGGCGGACGGACCGCTTAAACGGCTGCTCGTGCCGATTCTTTTACCTGA
GAAATGCTACGACCAACTTTTCGTTCACTGGGACTTGCTTCACGTCCCCTGCCTCAAGATTCTCCTCAGCAAAGG
CCTGGGGCTGGGCATTGTGGCTGGCTCACTTCTAGTAAAGCTGCCCCAGGTGTTTAAAATCCGGGGAGCCAAGAG
TGCTGAAGGGTTGAGTCTCCAGTCTGTAATGCTGGAGCTAGTGGCATTGACTGGGACCATGGTCTACAGCATCAC
TAACAACCTTCCCATTTCAGCTCTTGGGGTGAAGCCTTATTCTGATGCTCCAGACGATCACCATCTGCTTCCTGGT
CATGCACTACAGAGGACAGACTGTGAAAGGTGTGCTTTCTCGCTTGCTACGGCCTGGTCCTGCTGGTGCTTCT
CTCACCTCTGACGCCCTTGACTGTAGTCACCCTGCTCCAGGCCTCCAATGTGCCTGCTGTGGTGGTGGGGAGGCT
TCTCCAGGCAGCCACCAACTACCACAACGGGTACACAGGCCAGCTCTCAGCCATCACAGTCTTCTGCTGTTTGG
GGGCTCCCTGGCCCGAATCTTCACTTCCATTTCAGGAAACCGGAGATCCCCTGATGGCTGGGACCTTTGTGGTCTC
CTCTCTCTGCAACGGCCTCATCGCCGCCAGCTGCTCTTCTACTGGAATGCAAAGCCTCCCCACAAGCAGAAAAA
GGCGCAG**TAG**AGCCAGCTACTGGAGTCATTCCGTTTCCACTCATTACCCAACCTCAGGGTTCTCCCCATCTGAG
CCAGCCTGCTGGTGTGACTTACTCATCCTCCATTCTCTGCACTTGCAGACTTTCTGAGCCAGGGTTTTCTTTTA
GTGGAACAAATGGTTGATGGATCCAGATCCTTAGAAAAGGAGAGGATGGGGGTAGAGTCTCCCAAGCCAAAATT
TTGACATTTGAGTGCTTTTCGTAAGCCCTGTACATGTACTATTAATTCAGTCATTTCAGCCAAGCCTCCTCCTCTAG
CAGCAATTTCCAGCTGTTTAACTATCCTGGGCAAATGTTTTACCCTGTCTCCAGCCTCCCTGCTTCCCTTCT
GGCCCTGGAAGACTGAGTCTGGACGGCAGAGTGGAGGGACTGGGAGGCTGTGGCTGCCTCCCTCCCTCAGCCCGG
CTGGGACTGTCTCCCGGACCCAGTGCTGGGGTGGGGGAAGGGGACGGAGAAAGTACTCAGGCAGGGCCCCAGGG
TGGGGTGAGGAGGTTCTTGCTCTGGCAGGTCTAGGCGGAAGGGAGTGGAGATGGGGCTGGTTGCTGCTGCAGTGA
GGGGAACAGATGGGACAATAAAGACTGGAGACTCAGTTGAATAATGCAAAAAAAAAAAAAA

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FIGURE 631

MAAEADGPLKRLLPILLPEKCYDQLFVQWDLLHVPCLKILLSKGLGLGIVAGSLLVKLPQVFKIRGAKSAEGLS
LQSVMLELVALTGTMTVYSITNNFPFSSWGEALFLMLQTITICFLVMHYRGQTVKGVAFACYGLVLLVLLSPLTP
LTVVTLLQASNVPVAVVGRLLQAATNYHNGYTGQLSAITVFLFEGGSLARIFTSIQETGDFLMAGTFVVSLLCNG
LIAAQLLFYWNAKPPHKQKKAQ

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FIGURE 632

CGGGAGGTCAGAAAACCGGGCCGCGGGCGGCACCGACAGCTGGGGCCCCGGGTCAGGGACACGCGGAGGTCAGGCC
GGTGAAGGCGGCAGGAAGCTGGAGCACGATCCCAGGAGGAACAATCCTGCACC**ATG**ACTCAACAGCCACTTCGAG
GAGTGACCAGCCTGCGTTTCAACCAAGACCAAAGCTGCTTTTGCTGCGCCATGGAGACAGGTGTGCGCATCTACA
ACGTGGAGCCCTTGATGGAGAAGGGGCATCTGGACCACGAGCAGGTGGGCAGCATGGGCTTGGTGGAGATGCTGC
ACCGCTCCAACCTTCTGGCCTTGGTGGGCGGTGGTAGTAGTCCCAAGTTCTCAGAGATCTCAGTGCTGATCTGGG
ACGATGCCCCGGGAGGGCAAGGACTCCAAGGAGAAGCTGGTGCTGGAGTTCACCTTCACCAAGCCAGTGCTTTCTG
TGCGCATGCGCCATGACAAGATCGTGATCGTGCTGAAGAACCGCATCTATGTGTACTCCTTCCCCGACAATCCCC
GAAAGCTGTTTGAGTTTGATACCCGGGACAACCCCAAGGGGCTCTGTGACCTCTGCCCCAGCCTGGAGAAGCAAC
TGCTAGTGTTCCCGGGACACAAGTGTGGGAGTCTGCAACTTGTGGACCTGGCGAGCACAAAGCCTGGCACCTCGT
CTGCTCCATTACGATCAATGCACATCAGAGTGACATAGCCTGTGTGTCTCTAAACCAGCCAGGCACTGTAGTGG
CCTCAGCCTCCCAGAAGGGTACCCCTTATTGCGCTCTTTGACACACAATCCAAGGAGAACTGGTGGAGCTGCGCC
GAGGCACTGACCCTGCCACCCTCTACTGCATTAACCTTCAGCCACGACTCCTCCTTCTCCTCTGCGCTTCCAGTGATA
AGGGTACTGTCCATATCTTTGCTCTCAAGGATACCCGCTCAACCGCGCTCCGCGCTGGCTCGCGTGGGCAAGG
TGGGGCCTATGATTGGGCAGTACGTGGACTCTCAGTGGAGCCTGGCGAGCTTCACTGTGCCTGCTGAGTCAGCTT
GCATCTGCGCCTTCGGTCGCAATACTTCCAAGAACGTCAACTCTGTCAATTGCCATCTGCGTAGATGGGACCTTCC
ACAAATATGTCTTCACTCCTGATGGAACTGCAACAGAGAGGCTTTCGACGTGTACCTTGACATCTGTGATGATG
ATGACTTT**TAA**GGACCCTGGGGGCTGTGCTAGGGACCTGCAGTGGCAGAACTGCAGAGCTGAGCCTTGGCAGTGG
GGCGTGCTTGGAAGCCACCAGCCAGCAAGCATTAAATGGGGCTGGTGGCCACTTTCCACTCAGCAGAGCTATGTCT
AAATAAAGAGCTCACTTCCCCCAGCACTTCTTGATGACTGTGTGCCCCAAGGGCCAGGCCAGAGACCCAGGAAG
GCAGCGACCCCTTGGGATCCCTAACCTGGAGGAAATTGCCAGGGACCCAGAGGGAGTGCCCTAATCCAACCTGGG
GATTTTTTAAAGCTTCCTAGGAAGAGATGATCTCCGATGTGATGAATACGAATAAAAGGCCCTTAATGGC

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FIGURE 633

MTQQPLRGVTS LR FNQDQSCFCCAMETGVRIYNVEPLMEKGHLDHEQVGS MGLVEM LHR SNLLALVGGGSSPKFS
EISVLIWDDAREGKDSKEKLVLEFTFTKPVLSVRMRHDKIVIVLKNRIYVYSFPDNPRKLFEFDTRDNPKGLCDL
CPSLEKQLLVFPGHKCGLQLVDLASTKPGTSSAPFTINAHQSDIACVSLNQPGTVVASASQKGT LIRLFD TQSK
EKLVELRRGTD PATLYCINF SHDSSFLCASSDKGT VHIFALKDTRLNRRSALARVGKVGPMIGQYVDSQWSLASF
TVPAESACICAFGRNTSKNVNSVIAICVDGTFHKYVFTPDGNCNREAFDVYLDICDDDDF

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FIGURE 634

ACGCCCTATACAACTTGGCTTCACATACTTTTACACTAACTTTATATGATTTTTAAAACTGGTCTGATCGGACT
TCTCGTCTGGGACACTGTTTACTGGAGTCTGGCCGGCTCTCCGTGCTCCTCTTGGTACCTCATTITGGGGAGAA
CCTTAAACCCACTCGAGCAGATAATCTCCGCCCTTGACCGGTGCCACCAAAGAAGGGTTGGAACC**ATGT**GGACTTT
TCTGGGCATTGCCACTTTTACCTATTTTTATAAGAAGTTCGGGGACTTCATCACTTTGGCCAACAGGGAGGTCTCT
GTTGTGCGTGCTGGTGTTCCTCTCGCTGGGCCTGGTGTCTCCTACCGCTGTGCCACCGAAACGGGGGTCTCCT
CGGGCGCCAGCGGAGCGGCTCCAGTTTCGCCCTCTTCTCGGATATTCTCTCAGGCCTGCCTTTTATTGGCTTCTT
CTGGGCCAAATCCCCCCTGAATCAGAAAATAAGGAGCAGCTCGGGGCCAGGAGGCGCAGAAAAGGAACCAATAT
TTCAGAAACAAGCTTAATAGGAACAGCTGCCTGTACATCAACATCTTCTCAGAATGACCCAGAAGTTATCATCGT
GGGAGCTGGCGTGCTTGGCTCTGCTTTGGTAGCTGTGCTTTCCAGAGATGGAAGAAAGGTGACAGTCATTGAGAG
AGACTTAAAGAGCCTGACAGAATAGTTGGAGAATTCCTGCAGCCGGGTGGTTATCATGTTCTCAAAGACCTTGG
TCTTGGAGATACAGTGGAAGGTCTTGATGCCAGGTGTAAATGGTTACATGATTGATGATCAGGAAAGCAAATC
AGAGGTTTCAATTCTTACCCTCTGTGAGAAAACAATCAAGTGCAGAGTGAAGAGCTTTCCATCACGGAAGATT
CATCATGAGTCTCCGGAAGCAGCTATGGCAGAGCCCAATGCAAAGTTTATTGAAGGTGTTGTGTTACAGTTATT
AGAGGAAGATGATGTTGTGATGGGAGTTCAGTACAAGGATAAAGAGACTGGAGATATCAAGGAACCTCCATGCTCC
ACTGACTGTTGTTGCAGATGGGCTTTTCTCCAAGTTCAGGAAAAGCCTGGTCTCCAATAAAGTTTCTGTATCATC
TCATTTTGTGGCTTTCTTATGAAGAATGCACCACAGTTTAAAGCAAATCATGCTGAACCTATTTTAGCTAACCC
GAGTCCAGTTCTCATCTACCGGATTTTATCCAGTGAACCTCGAGTACTTGTTGACATTAGAGGAGAAATGCCAAG
GAATTTAAGAGAATACATGGTTGAAAAAATTTACCCACAAATACCTGATCACCTGAAAGAACCATTCTTAGAAGC
CACTGACAATTCTCATCTGAGGTCCATGCTAGCAAGCTTCCTTCCTCCTTCATCAGTGAAGAAACGAGGTGTTCT
TCTTTTGGGAGACGCATATAATATGAGGCATCCACTTACTGGTGGAGGAATGACTGTTGCTTTTAAAGATATAAA
ACTATGGAGAAAACCTGCTAAAGGGTATCCCTGACCTTTATGATGATGCAGCTATTTTCGAGGCCAACAAATCATT
TTACTGGGCAAGAAAAACATCTCATTCCTTTGTGCTGAATATCCTTGCTCAGGCTCTTTATGAATTATTTTCTGC
CACAGATGATTCCCTGCATCAACTAAGAAAAGCCTGTTTTCTTTATTTCAAACCTTGGTGGCGAATGTGTTGCGGG
TCCTGTTGGGCTGCTTTCTGTATTGTCTCCTAACCTCTAGCTTTAATTGGACACTTCTTTGCTGTTGCAATCTA
TGCCGIGTATTTTTGCTTTAAGTCAGAACCTTGGATTACAAACCTCGAGCCCTTCTCAGTAGTAGTGCTGTATT
GTACAAAGCGTGTTCTGTAATATTTCTCTAATTTACTCAGAAATGAAGTATATGGTTTCAT**TAA**GCTTAAAGGGG
AACCATTTGTGAATGAATATTTGGAACCTTACCAAGTCCTAAGAGACTTTTGGAAAGAGGATATATATAGCATAGTA
CCATACCACTTATAAAGTGGAACCTCTTGACCAAGATTTGGATTAAATTTGTTTTTGAAGTTTTTTGTATATAAA
TATGTAAATACATGCTTTAATTTGCAATTTAAAATGAAGGGTTAAATAAGTTAGACATTTGAAAGAAATGATTG
TTACCATAAATTAGTGCTAATGCTGAGGAGAACTACAGTTTTTCTTTTGAATTTAGTATTTGAGATGAGTTGTTG
GGACATGCAAATAAAATGAAGAATGAC

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FIGURE 635

MWTFGLGIATFTYFYKKFGDFITLANREVLLCVLVFLSLGLVLSYRCRHRNGLLGRQRSGSQFALFSDILSGLPF
IGFFWAKSPPESENKEQLGARRRRRKGTNISESTLIGTAACTSTSSQNDPEVIIVGAGVLGSALVAVLSRDGRKVT
VIERDLKEPDRIVGEFLQPGGYHVLKDLGLGDTVEGLDAQVVGMIHDQESKSEVQIPYPLSENNQVQSGRAFH
HGRFIMSLRKAAMAEPNAKFIEGVVLQLEEDDVVMGVQYKDKETGDIKELHAPLTVVADGLFSKFRKSLVSNKV
SVSSHVVGFLMKNAPOFKANHAELILANPSPVLIYRISSETRVLVDIRGEMPRNLREYMVEKIYPQIPDHLKEP
FLEATDNSHLRSM LASFLPPSSVKKRGVLLLGDAYNMRHPLTGGGMTVAFKDIKLWRKLLKGIPDLYDDAAIFEA
NKSFYWARKTSHSFVVNLAQALYELFSATDDSLHQLRKACFLYFKLGGECEVAGPVGLLSVLSPNPLALIGHFFA
VAIYAVYFCFKSEPWITKPRALLSSSAVLYKACSVIFPLIYSEM KYMVH

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FIGURE 636

GGCACGAGGGCGCGCGGAGGCTCCCGTGGCCTCGGACGCTCCTCCTAGCTAGCGGCCGCCGCCGCCGCCGCT
GCGCCTCCAGCTCCTTCGCCCCGGCGGGCCCCGGCCGCCGCTTCCGGCAGCTCACCTGGGAAGCGCTCACCTGGGA
CGCGCTCACCTGGGACGCGCTACCTGCCTCCGGGCGCCTGGGCTTCAGGATGAAAGGACCGTCTGGAGCAGCTGAA
GGCCAAGCAGCTGACACAGGATGATGATACTGATGCGGTTGAGATTGCTATCGACAACACGGCTTTTATGGACGA
GTTCTTTTCTGAGATTGAGGAAACTCGGCTTAACATTGACAAGATCTCAGAACATGTAGAGGAGGCTAAGAACT
CTACAGTATCATTCTCTCTGCACCGATTCCAGAGCCAAAAACCAAGGATGACCTAGAGCAGCTCACGACTGAGAT
TAAGAAAAGGGCCAACAACGTCCGGAACAACTGAAGAGCATGGAGAAGCATATTGAAGAAGATGAGGTCAGGTC
ATCGGCAGACCTTCGGATTCCGAAATCCCAGCACTCTGTCTTTCTCGGAAGTTTGTGGAGGTGATGACCAAATA
CAATGAAGCTCAAGTGGACTTCCGAGAACGCAGCAAAGGGCGAATCCAGCGGCAGCTCGAAATTACTGGCAAAAA
GACAACCGATGAGGAGCTGGAGGAGATGTTGGAGAGTGGCAACCCGGCCATCTTCACTTCTGGGATCATTGACTC
ACAGATTTCGAAGCAAGCCCTCAGTGAGATTGAGGGACGACACAAGGACATTGTGAGGCTGGAGAGCAGCATCAA
GGAGCTTCACGACATGTTTATGGACATCGCCATGCTGGTGGAGAATCAGGGTGAGATGTTAGATAACATAGAGTT
GAATGTCATGCACACAGTGGACCACGTGGAGAAGGCACGAGATGAAACGAAAAAAGCTGTGAAATACCAGAGTCA
GGCCCGGAAGAAATTGATAATTATCATTGTGCTAGTAGTTGTGTTGCTGGGCATTTTAGCATTGATTATTGGACT
TTCCGTTGGGCTGAATTAAGAGTGGCCTAAGAGGCTGCTGCACTGAAATAAACTGATTTCACTCCAGACTGGTGT
GGCCACCCCTTGTCTTCAGATGAGAATGGAGTCTGAATGGCCTTCTGAGAGCGAGTGCGACCCGTTCCCTTTGTTT
CCTTGCAACCACCCCTTGACCTGACTCAGCTAACAATCTAGCCCTGGGGGAATGTGATCTACCTGATGCGACCCCT
GAGTTCTCCCCAGAGCCTCCTCCTGCCCCACCAGCTCTCAAGTACCTTTTCTCCTGGACTGTGTGGACCCACCCA
GCTTTCTTCCCTCCCTGTTGTGTGTGTCAGATTATGCCTTGCACCTTGGGAAAGCTCTTGTGAGACTCTCCCAAGGTGC
TGATTTTTTCTACCTCATGGAGTATTCTCCAGAAACTGCAATGTATTTTTTTAGGGGAGTATCTTTAACAAGC
AGAATGATTCTTCTAAGTTTGGCAACAAGAAGGCTTGGATCTGAGTCTTCTACCTGGCAGGATGCCAATCCTGTT
TGTTGTCCGTATGTCTGAAAACATGAGGGACTGGCAGATGTCAATTTTGGTCTAAAGAGCTGACTTGTTTGAAAT
TCAGCCTTAAATTAAGCTCTTAGTTGTTTTCAGCTTGGGGGGCAACTTTGATTTTTCTCTGTGTTGTAGTCTCTCAT
ATTTACTCAAGGAGGGACCAGGATGATACAGTCATCTGAGGTTATGCTTTGCAAAAGGCTGACGGTATGGAATAT
GTTTCCATGTCTGAGTCTTAGAAACTGGCTGCTCATTGTTAGAAAGTGATGCTTTGTGAGACTATTGTCTTGGGG
CCAAAAATAATCAGGGATTTTAAATTGGGCAAGGGACAAGGTGCTAGAATCCTAAGCTCTGGAAATATTTTCATGA
CACTGGTGTATTCACTCATGTGTTCCAGATGTATTCTAATTGTGTATGAAATGTATGTACACATAAGTGTGTGTG
TCTCAGGAAGTAGGAAATAAAAAATGGAAGCTATTATGACCTCAAAAAAAAAAAGCCAACCTTGAGCTAGGATAAA
AATTGGGTAAAGGACATTTGCTTACCTGCAAATGAATCACTGTGGAAATGTGATCTTCCCATATCATCAAGAAAC
TTGTTTTCTGGATGAATACTGGGAGAATAAAATGAGAACTCTGGAGTGAGCTAAATTGATCCCAATTAAGTTTTT
CTGCTTAGCAGACAGAAGGTATAATTTTTTGACACCCCTTCCCACCTGGTGCCTATGCTAGGCTTGTCTGAGAA
CATCCCTCAGTAACCTTGATATTCACATGACCTACAGGATGTCCCATCTGCAGGGCTGAGTCAGTTGGGGAACACC
AGAGGCTACACAGTAGCTCTTCTGCTACTCGGTTAATGAGCTTGGCAGGTTCTTTGTCTCACTGAATTCTTATC
ATGGAAACAGCAGCAGCAGCCGCTAGGAAATCTTCAAGTGATGTCTGTGCTAACCCAGTGGAATCCCTTAG
ATCCCTTGCTGGTCTCTGGCAGTCTCCTTGATTTTGGGTACCATGTATATTTCCGCTTTGACTTTAACGCTTTT
TAGGATAGGGTAAGCACCCCTTAATTCAGGCACTGTCCATTAGCTTCCCTTGCAAAGGCTACTTATGGCCGGTCA
AATCCAGCACTCAGACAGAGCCAAGGCAATATCCTCTTGCCCATGGCTATGATGTCAGACAGTGGATGGGCTCCA
GCAACAAGAGACAAAATAACTAAAGGCCTTTGCTCTCCTCTGACATTGAGGCCTGGGGCTTACAGTTTGAATAC
AACATGTGAAGGTTTTTGTGTTGTTTGTATTTTTTTAGATGTAAACTTGATTATTTTATTGCTAATTTAAAAATA
AAAAATGACTTTGTATTGATTGTGAAAAA

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FIGURE 637

MKDRLEQLKAKQLTQDDDTDAVEIAIDNTAFMDEFFSEIEETRLNIDKISEHVVEEAKKLYSIILSAPIPEPKTKD
DLEQLTTEIKKRANNVRNKLKSMEKHIEEDEVRSSADLRIRKSQHSVLSRKFFVEVMKYNEAQVDFRERSKGRIQ
RQLEITGKKTDEELEEMLESGNPAIFTSGIIDSQISKQALSEIEGRHKDIVRLESSIKELHDMFMDIAMLVENQ
GEMLDNIELNVMHTVDHVEKARDETKKAVKYQSQARKKLIIIVLVVVLLGILALIIGLSVGLN

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FIGURE 638A

AATAAGAAAAAGCTTTTCATTTTGAAATCTAGAATACCTCCACTTTTGAAAATCTTTGATTTCCTCAAATTTTCTCT
TGCTATGCACTAGTTAAAAGATAAGGTATTATATAATGAGCAATAGCACAGATCTCAAACCTGTTTGAGTTGCATA
TGGGCCATACCTTCTTTTCTGTAACTGCATACCCATGCATTAAACACTTGTGCGCTTTTCCAGATCTGCTCACTT
TAGCACTCTGGCAATTAAACAGAACCCCTTCTGGCAGAAGCTTATTGCAATTTGGGGAATGTGTACAAGGAAAG
AGGGCAGTTGCAGGAGGCAATTGAGCATTATCGACATGCATTGCGTCTCAAACCTGATTTCATCGATGGTTATAT
TAACGCTGCAGCCGCTTGGTAGCAGCGGGTGACATGGAAGGGGCAGTACAAGCTTACGTCTCTGCTCTTCAGTA
CAATCCTGATTTGTACTGTGTTTCGAGTGACCTGGGGAACCTGCTCAAAGCCCTGGGTGCTTGGAGAAGCCAA
GAAGGTTTCAGGTGGGTGAAACCTCCTATTCCATGCGTAAGGTGCCTCGCTGAAGGGAGCTCGAGGCCCTGGATCT
AGGGCAGACACACAACCTCCTCCTCCTTCCAGCAAGGAACGCACCGAAAAGTCACATGATGAGAAATATGGTA
ACGGGTTTGTAACTGCCACAGCAAAACAATTTGCCCTCCATGCCTGAATCTTCTGTCTTGTGGCTTCAGAAACAGC
TTAAATAAATTTTATTTACAAGCAAGTTATGTAAGAGAATGTTTTATACTATAGCCACAATCTGTCAAAGATAA
GTAAAGTTAATTGATATTAAAAATTATTAGAGATAATTTACTTAGTAAAGCTTCTAACTCTTCTGTTGTTCA
TTTTTTTTCTTTTTCTTCTTGTGTTGGATTGCAGCATTCTGCTCTTCTGATGATGCGCTGTGACCCTGCAGTA
GCGCAAAGGCTGCGCAGCGTTAATGCGCATTGCGTGCGAATGAACCCCTGTGAACGGTTGACTAGATGAGTAATC
TGATTGACTGGCTCCCTCAGTCCTATTCTGTAGCCTTTTTGGATAAAATTGGGTTTTAACAATACCTCGAGTCCAA
CTAATCTCATTAAACAAATATTCTCCATGGGCCCTGTCTAGTAGATTAATGGATCTGGTTGGCCGTTTGCTGCGTC
TAGGGGTGTTCTATGTAGCGCAGCAGTTGCGCAGCGATTGCGCAGTGCGATGCTGTTAGGTTGCGCAAGCGATGTT
TGCGCTCGCATTACAGGGACCTCAACCTAGGTGCAATCCTGTCTGATGTGAGGTTTCAGCTTCAGTCTCCTTGGGA
GACGGGGCATTGTGAGAATGTAACCTAAAGCCTGGCTTTATGATATCCTACTTGGCAGAAAGACATTTTTCTCCT
CAGTAGCATAGTTTTGATGTTAGTGAGGAACATTGTTGAAGAGCAGCATTTCCTCAAATGTGTTTCATAGTATTC
TAATAAAATGCCCAATGAAAGAAGAGTTCCATGGTCAACTAAGTTGAGGGAACCCCTGTTACACTATTAAAGGCTT
AGGGAAGTCCAGTAAAGAAACCTATTTTTCCGAATTTATTTGATCATGAACCTCTTTTTTTTTTTCAGCCATACCTCT
TAACACCTCATAGAACACACTTTGGGAAACAGTGGGGGTAGGAAACTCGGCCTCAAGTTGCGCCCTCTAGGTAG
CACTTGAAACATGACAAGGGCCCGTAGTTGTTTGGATAAGAGAACTCCAGCATAGAGCCTTATAGCAACTGACT
TCCCAGTTAAGTCCCAGTGTAAGGGTTGGTCTTTGGTTGGCAGAAGTGAACATGGTGGTTTGCAGTTGGGTTCTG
GTGGCGCAGGCGCAGGAGCAGCCAGCTGTGGCAGCGCATTAGTTTTGGCGCAAGCGAGCCTATGCTGCAGGGTCA
CTTTTGGCTGGTCAGAGAAGGAATAATGATATCACCTTCTTCCCCCTCCCCCAATCTTTTTTTTTTCCCTTT
ACAAATTTTCCCCTTTCCCTTTACCTCCTTCCCTCCCATCTTCTTTTCAATTAACCCCTCCTAAGGCATGTTATTT
GAAAGCAATTGAGACGCAACCGAAGCTTTGCAGTAGCTTGGAGTAATCTTGGCTGTGTTTTCAATGCACAAGGGGA
AATTTGGCTTGCAATTCATCACTTTGAAAAGGCTGTCACCCTTGACCCAACTTTCTGGATGCTTATATCAATTT
AGGAAATGTCTTGAAAGAGGCGACGCAATTTTGACAGAGCTGTGGCAGCTTATCTTCGTGCCCTAAGTTTGAGTCC
AATCAGCAGTGGTGCACGGCAACCTGGCTTGTGTATACTATGAGCAAGGCCTGATAGATCTGGCAATAGACAC
CTACAGGCGGGCTATCGAACTACAACCACATTTCCCTGATGCTTACTGCAACCTAGCCAATGCTCTCAAAGAGAA
GGCAGTGTGCTGAAGCAGAAGATTGTTATAATACAGCTCTCCGTCTGTGTCCCACCCATGCAGACTCTCTGAA
TAACCTAGCCAATATCAAACGAGAACAGGGAAACATTGAAGAGGCAGTTGCTTGTATCGTAAAGCATTAGAAGT
CTTCCCAGAGTTTGCTGCTGCCATTCAAATTTAGCAAGTGTACTGCAGCAGCAGGGAAAACCTGCAGGAAGCTCT
GATGCATTATAAGGAGGCTATTGCAATCAGTCCTACCTTTGCTGATGCCTACTCTAATATGGGAAACACTCTAAA
GGAGATGCAGGATGTTTCAGGGAGCCTTGCAGTGTTATACGCGTGCCATCCAAATTAATCCTGCATTGTCAGATGC
ACATAGCAATCTGGCTTCCATTATAAGGATTGAGGGAATATTCCAGAAGCCATAGCTTCTTACCGCACGGCTCT
GAACTTAAGCCTGATTTTCTGATGCTTATTGTAACTTGGCTCATTGCCTGCAGATTGTCTGTGATTGGACAGA
CTATGATGAGCGAATGAAGAAGTTGGTCAGTATTGTGGCTGACCAGTTAGAGAAGAATAGGTTGCCTTCTGTGCA
TCCTCATCATAGTATGCTATATCCTCTTTCTCATGGCTTCAGGAAGGCTATTGCTGAGAGGCACGGCAACCTGTG
CTTAGATAAGATTAAATGTTCTTCATAAACCACCATATGAACATCCAAAGACTTGAAGCTCAGTGATGGTGGCT
GCGTGTAGGATATGTGAGTTCCGACTTTGGGAATCATCTACTTCTCACCTTATGCAGTCTATTCCAGGCATGCA
CAATCCTGATAAATTTGAGGTGTTCTGTTATGCCCTGAGCCAGACGATGGCACAACTTCCGAGTGAAGGTGAT
GGCAGAAGCCAATCATTTTCAATTGATCTTTCTCAGATTCCATGCAATGGAAAAGCAGCTGATCGCATCCATCAGGA
TGAATTCATATCCTTGTAATATGAATGGCTATACTAAGGGCGCTCGAAATGAGCTTTTTGCTCTCAGGCCAGC
TCCTATTGAGCAATGTGGCTGGGATACCTGGGACGAGTGGTGGCTTTTCATGGATTATATTACTGATCA

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FIGURE 638B

GGAAACTTCGCCAGCTGAAGTTGCTGAGCAGTATTCCGAGAAATTGGCTTATATGCCCCACACTTTTTTTTATTGG
TGATCATGCTAATATGTTCCCTCACCTGAAGAAAAAGCAGTCATCGATTTTAAGTCCAATGGGCACATTTATGA
CAATCGGATAGTTCTGAATGGCATCGACCTCAAAGCATTCTTGATAGTCTACCAGATGTGAAAATTGTCAAGAT
GAAGTGTCTGATGGAGG²ACAAATGCAGATAGCAGTAACACAGCTCTTAATATGCCTGTTATTCCCTATGAATAC
TATTGCAGAAGCAGTTATTGAAATGATTAACCGAGGACAGATTCAAATAACAATTAATGGATTAGTATTAGCAA
TGGACTGGCAACTACTCAGATCAACAATAAGGCTGCAACTGGAGAGGAGGTTCCCCGTACCATTATTGTAACCAC
CCGTTCTCAGTACGGGTACCAGAAGATGCCATCGTATACTGTAACTTTAATCAGTTGTATAAAATTGACCCCTTC
TACTTTGCAGATGTGGGCAAACATTCTGAAGCGTGTTCCTCAATAGTGTACTCTGGCTGTTGCGTTTTCCAGCAGT
AGGAGAACCTAATATTCAACAGTATGCACAAAACATGGGCCTGCCCCAGAACCCTATCATTTTTTTACCTGTTGC
TCCTAAAGAGGAACACGTCAGGAGAGGCCAGCTGGCTGATGTCTGCTTGGACACTCCACTCTGTAATGGGCACAC
CACAGGGATGGATGTCCTCTGGGCAGGGACCCCCATGGTGACTATGCCAGGAGAGACTCTTGCTTCTCGAGTTGC
AGCATCCCAGCTCACTTGCTTAGGTTGTCTTGAGCTTATTGCTAAAAACAGACAAGAATATGAAGACATAGCTGT
GAAGCTGGGAACTGATCTAGAATACCTGAAGAAAGTTCGTGGCAAAGTCTGGAAGCAAAGAATATCTAGCCCTCT
GTTCAACACCAAACAATACACAATGGAAGTAGAGCGGCTCTATCTACAGATGTGGGAGCATTATGCAGCTGGCAA
CAAACCTGACCACATGATTAAGCCTGTTGAAGTCACTGAGTCAGCAT~~TAA~~AATAAAGACTGCACAGGAGAATTACCC
CTATACCTGAGCCTCAACCTTCTGGGGGAAAGGGAAGTAGATAACATACTTCTTACTTGTCTGTACAGTACCTTG
TTGCAGATGGGTGATATATAATGGTAATAGAATAGCACAGCCAGACTTGCTTCCTGCATGGTAGGGAGAGACACA
AAAGATGGGAACTGCTTTTCCACAAGGAATCTCCGTAGAATTTTGGCGGACCAGATGGTGCATAGGTCTGGAA
GGTCTGATCTCCCTTGGTCTTCCATGGGATGGTTAGTGTGGAGGGGAGATATAGATTGTCCGGCCGCTTTGTGAT
TCCATGGATTGATTAGTCTTCTGGATTTTTTTTTTCTTTATATTTGGGTACTGGAGCTTTTAAAAATGTTTGGT
TTCAGGTATTTTTTATTATGTGAAGTGTATATGATTCTCTTGAGATAAGGTTTTAAGCTAAAATGTTACTCCCTG
TTTTAGTTTCTGAAGTCTGACAGATTGACAGGGACTTTGCTGGTGTAGTCTTTTTATAGGTTTTATAAACCCTT
GAGCCTATATCAGTCGTTTTAGTGTCTGACCTAATATTTGGAGCTATCAGTGCTTTGTGATTTAGATGATGACT
CAAGATTTTTTCTGGTCCATTTCCCATTTCTTTTCTTCCCTGACCCCCATACCCTCACCTTAAAATTCTCCTG
TAACTCAACTAACAATAAAGCCTGATTCAAAACATCCTAGGGTGTTTTAAACACACCATCTGGTGCCAAATGA
AGATTTTTTAGGAGTGATTACTAATTATCAAGGGCACAGTTGTGGTACTGTCATTGATAATAATATAGTTTTTTTT
TTTTTCTAATTTTGACCTGTTTACCAGTGTTTTACCCTTGACTGCCCCCTTCTATGCTGCTTCCAAAAGTGATA
GTGTGTGTAAGATTTTTACCTTCCTTTCTAAAGTTTTTTTTTTTTTTTTTTTAAAGTGAGTCCTGTTCTTCTATTT
CTTTCAGCAGAAATGAAATCCCAGGTAAGTATAAGTATTCAAGTATTTGATCAGTAAGTCACAGTTATCTCCAGT
GCATTAATAACCTTCATCAAGAAATAGGTTATAGGTAAATCTCTGAAGGATCATCTATGTATTCAAGTAATTA
TTTTTTAGATAATAACTGTCTTCTGGACTTGGTCTTGAAGTCTGTACAGATTTCAGCCTCAGTAGTAGCGAACTGC
ACTGCTGTTTGGTTTGGAGTACAAATTAGACTTATAGTCTCCTGGAACCTGAGTTATTAATAATCATAGGAATAA
AATTATGGGATCTCAACAAAGGGTCGAGGGTTTGAGGCTTAAACAAGCCAACATATGAATATATGTTTTGTCTCG
CTATACTGCACCTACGCTATCCAGTTGCAGGTAATTTTTTGTCTGCTAGTAGTGTCTAGATTATGTCTTTCCAA
AGCGCTGAGGCTGTGCACCTATTCTGTAGTTGCAGCTGATGCCTGAATGTATCCTAGCTGACAAATTATTGATTA
ATAAGAACTTGAATTTCTGGAAGATTCTTACTGTTAACCAAATTTTGAGCAAGGAGTCTCAAAGGTAATTCTGAA
CCAGAATTACATGTTAATGAACAGTGTACCTTTTAACAGTGTAAATCACGGAATATCCGTGAAGGGATTCTTAA
TTATTTTTTACCAGTTGATTGAAATATCAGTTAAAGGTTGCCAGCATGGTTGCAGATAAACTGATGTTTGAAAT
TCGCTGAAATACTTAATGTGGAATAGGATAATATACTTCCAATGCCCTCAAGGCTGTGACCTTACAGCCATTTTA
CATAGCACATCATTCTCTCTATAGGGATGAACTTTTTCTTGGCACGAAAAGTAGCCGCTCTGGTTGAAGCTTTGC
TTATTGTAACAGGCTTTTATTTCCAGGTAATATGTCTTGGAAAGACTTAATTCTGATTAGAGATATAGATATTACT
GGAACTAATTGTTTTTTTTTCTATTGTACTCTGCTTTATCAAAGAAGTAAACATTTAAATCGTACTACAGAAAT
TAAGATGTTGTCTTGCGATCCTTAATAAATGAATGATTTCCTTTAAAAAA

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FIGURE 639

MISPSSPPPPNLFFFPLQIFPPFTSFPSHLLSLTPPKACYLKAJETQPNFAVAWSNLGCVFNAQGEIWLAIHHF
EKAVTLDPNFLDAYINLGNVLKEARIFDRAVAAYLRALSLSPNHAVVHGNLACVYYEQGLIDLDAIDTYRRAIELQ
PHFPDAYCNLANALKEKGSVAEAEDCYNTALRLCPTHADSLNNLANIKREQGNIEEAVRLYRKALEVFPEFAAAH
SNLASVLQQQGLQEALMHYKEAIRISPTFADAYSNMGNLTKEMQDVQALQCYTRAIQINPAFADAHSNLASIH
KDSGNIPEAIASYRTALKLKPDPDAYCNLAHCLQIVCDWTDYDERMKKLVSIADQLEKNRFPVHPHHSMLYP
LSHGFRKAI AERHGNLCLDKINV LHKPPYEH PKDLKLS DGRLRVGYVSSDFGNHPTSHLMQSI PGMHNPDKFEVF
CYALSPDDGTNFRVKVMAEАНHFI DLSQIPCNGKAADRIHQDGIHILVNMNGYTKGARNELFALRPAPIQAMWL
YPGTSGALFMDYIITDQETSPAEEVAEQYSEKLAYMPHTFFIGDHANMFPHLKKKAVIDFKSNGHIYDNRIVLNGI
DLKAFDLSLPDVKIVKMKCPDGGDNADSSNTALNMPVIPMNTIAEAVIEMINRGQIQITINGFSISNGLATTQIN
NKAATGEEVPRTIIVTTRSQYGLPEDAIVYCНFNQLYKIDPSTLQMWANILKRVPN SVLWLLRFPVAVGEPNIQQY
AQNMGLPQNRIIFSPVAPKEEHVRRGQLADVCLDTPLCNGHTTGMDVLWAGTPMVTMPGETLASRVAASQLTCLG
CLELIAKNRQEYEDIAVKLGTDLEYLKKVRGKVWKQRISSPLFNTKQYTMELERLYLQMW EHYAAGNKPDHMIKP
VEVTESA

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FIGURE 640

ATGCGTGAGTGCACTCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGC
CTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCTTCAAC
ACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCGGGCAGTGTTGTAGACTTGGAACCCACAGTCATT
GATGAAGTTCGCACTGGCACTTACCGCCAGCTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTGGACCGAATTCGCAAGCTG
GCTGACCAGTGCAACCGTCTTCAGGGCTTCTTGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTTACC
TCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCC
CAGGTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATCGAGCGCCCAACCTACACT
AACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCCAGACCAACCTGGTGGCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCCTGTC
ATCTCTGCTGAGAAAGCCTACCATGAACAGCTTACTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTATACCGTGGTGACGTGGTTCCC
AAAGATGTCAATGCTGCCATTGCCACCATCAAACCAAGCGTACCATCCAGTTTGTGGATTGGTGGCCCACTGGC
TTCAAGGTTGGCATTAAATTACCAGCCTCCCACTGTGGTGCCTGGCGGAGACCTGGCCAAGGTACAGAGAGCTGTG
TGCATGCTGAGCAATACCACAGCTGTTGCCGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTCAGAGGCCCGTGAGGACATG
GCTGCCCTTGAGAAGGATTATGAGGAGGTTGGAGCAGATAGTGCTGACGGAGAGGATGAGGGTGAAGAGTATTAA

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FIGURE 641

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLTVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAVAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEVGADSADGEDEGEY

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FIGURE 642

AGTGTGGTTTTAGTTTTCTAAGAAGTGGCGTGGTTTGGGGCTTTATATCCGGGAGGAGCATATGTACGCAAAT
CCTGGGGCGTTTGCAAACCCGGATCCGGGGCGTCTGGCCCCATGCCCGGCCGGGCGTTTGAGGGCTACTGCCACG
CAGCGTTTCTGGAGCCTGCCGGCTGGTGCCCTGGTGGCCTTTATCTCTGTCCCCCTTTGTCCTCTTTATCTCAGG
CTCTCCAGGAGGCCGGGGGGCCACTCCGCCTATCGCTCCCCCTCGGCTACGCTGCCACTCCAATGCCCCGCAGGT
CGCGAGCTGCTGTTCTTTGCAAGGCGCCGGAGAACCAGGGGCGTCCCGCGCCACCTCTGACTCGGAGCAGCGCCG
AGCACTGACGCTCCCGCCCTTGGGCAAGGACGCCAGTGCGCCCCGCGCGCTCCCTCTGCGCGGCAGCCCCGTGCGG
GGCCCTCAAGGGGAAGCCCAGGCCAGGATGGCCCCGGGTGCGCGGTGGCCGGGCTCCTGTTGCTGGCGGCCGCC
GGCCTCGGAGGAGTGGCGGAGGGGGCCAGGGCTAGCCTTCAGCGAGGATGTGCTGAGCGTGTTCGGCGCGAATCTG
AGCCTGTGCGCGGCGCAGCTCCAGCACTTGCTGGAGCAGATGGGAGCCGCCTCCCGCGTGGGCGTCCCGGAGCCT
GGCCAGCTGCACTTCAACCAGTGTTTAACTGCTGAAGAGATCTTTCCCTTCATGGCTTTTCAAATGCTACCCAA
ATAACCAGCTCCAAATTCTCTGTCTGTCCAGCAGTCTTACAGCAATTGAACTTTCACCCATGTGAGGATCGG
CCCAGCACAAAACAAGACCAAGTCATTGAGAAGTTTGGGGATATGGATTCTGTGCTGAGTACGATTATTAATCTG
GCATCTCTCCTCGGATTGATTTTGAATCCACTGATAAAGAAATCTTATTTCCCAAAGATTTTGACCTTTTTTG
GGGCTGGCTATTGGGACTCTTTTTTCAAATGCAATTTTCCAATTTATCCAGAGGCATTGGATTGATCCCAA
GTCGACAGTTATGTTGAGAAGGCAGTTGCTGTGTTTGGTGGATTTTACCTACTTTTCTTTTTTGAAGAATGCTA
AAGATGTTATTAAAGACATATGGTCAGAATGGTCATACCCACTTTGGAAATGATAACTTTGGTCTCAAGAAAA
ACTCATCAACCTAAAGCATTACCTGCCATCAATGGTGTGACATGCTATGCAAATCCTGCTGTCACAGAAGCTAAT
GGACATATCCATTTTGATAATGTGAGTGTGGTATCTCTACAGGATGGAAAAAAGAGCCAAGTTCATGTACCTGT
TTGAAGGGGCCCAAATGTCAGAAATAGGGACGATTGCCTGGATGATAACGCTCTGCGATGCCCTCCACAATTT
ATCGATGGCCTGGCGATTGGGGCTTCTGACCTTGTCTCTCCTTCAGGGACTCAGTACTTCCATAGCAATCCTA
TGTGAGGAGTTTCCCCACGAGTTAGGAGACTTTGTGATCCTACTCAATGCAGGGATGAGCACTCGACAAGCCTTG
CTATTCAACTTCTTTCTGCTATGTTGGGCTAGCTTTTGGCATTTTGGTGGGCAACAATTTGCT
CCAAATATTATATTGCACTTGCTGGAGGCATGTTTCTCTATATTTCTCTGCGAGATATGTTTCCAGAGATGAAT
GATATGCTGAGAGAAAAGGTAAGTGAAGAAAAACCGATTTACCTTCTTCATGATTCAGAATGCTGGAATGTTA
ACTGGATTACAGCCATTCTACTCATTACCTTGTATGCAGGAGAAATCGAATTGGAGTAATAGAAAATGGAAGAT
GGTGTGTTAATAAAGGCATTTAATAGATAAAAAACATCTCCAAAAAGGATTTTGAAGCTGATCCTATTTAGTTAA
AAAGATAATTTTGCTTTCAACTGTAGGTCCAGAAAACTAATTATTGGCATCAGTCTGTGAAATAGTCCATTATTT
GTTGTTAAAAATGCTTCAAAAGGTTTTTCAAGTGTGAGTCTGAGATGCCTGGTATATAGGAGCCTTTGGGAAATACT
TATTTTTTCACTATTCCATGCATATTAGATATCACCATGAAGCAAGAGACATGCATTCTATAATCATGTAGACACT
CAGACTCAGGGGAAAAATACAAGTTATATCCTGAAAGCCTTTAAACTCTATGGTAGGATCAAAGATTCAAATGGT
TTCAGAGAGGTTTTTATTCAATTAATTTGTTCTAGTGCTTTCAAGAGCAAGTACATCAAATGTAGAAGGTA
TGTATGCAACACTAATATAAATTATTCCAAGTCTTTAAGGAGCCAAAGAAAAAAGATTTCTCACAGCTTTTTG
TTCTGTTTTGTATTTCAATTAGGAACTTGCAGTATTATTTGAAAACCATTTCTAAAATAATAGGAGTTAGGAAAT
AAATAAAGTTTTGCTAGCCCTGCTAAGTTTCAAGGCTTAGAGGCTTATCGCTAAGTGTAACTTCACCAGATTCCAC
GAAAAGCTGGATAGCTTTTTTTCTGACTTATGTTGTGGTTGCACCCCTCACAAATGGCAGAACAGTATGTAAAGC
TGGTAACACCTCGGTTTCAGTGCACCATGTGTTTGTCTTGTGAAGGTGAAGAATATGTTGGTTTAGAGAAAGAAA
TTGGATGTAATTTTATGCAATTTACTTTTAAAGACAAACATAACTATTTAGCAGAGAATATTTTAAATAAATGCAA
AACAACAGCTGGACTGCTGTACATCAAGGACAGATTAAGTGGAAAAACATATGTTCCCTTATGTGTGATTGAGAGCC
ATTCAGAAAAGACTTCCCTTGTGTTTCAAGCCTATACTTTTCCATATGGTATACCTTGAAAAAATTAGCACACCAT
GGTTATTTTTCTACCTTTTATAAAAGACAGAGCCTGTTTACTCATTTAGAAGATAGAGAAAATTGGTCTAAAATT
GAACATCCTAGATTACACTCCCAAGTCACTTAAGGTGATTTGATGGTGAAGGAAATGATTGACAAAGCCCAACA
ATGATCTCAGGAATTACATTTTCCAACAGACCAAAAAATGTTTTTATGTAGCAGCAATGCAGATTTGGTGAATAT
TTAATATATATTTTAGTATGTATTTCACTTTATGACTGACAATTAAAAAATATTGTTTGGCCAAATAGTAAACAC
CCTTTTGAACCATGAAAAA

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FIGURE 643

MAPGRAVAGLLLLLAAAGLGGVAEGPGLAFSEDVLSVFGANLSLSAAQLQHLLLEQMGAASRVGVPEPGQLHFNQCL
TAEEIFSLHGFSNATQITSSKFSVICPAVLQQLNFHPCEDRPHKHKTRPSHSEVWGYGFLSVTIINLASLLGLILT
PLIKKSYFPKILTFFVGLAIGTLFSNAIFQLIPEAFGFDPKVDSYVEKAVAVFGGFYLLFFFFERMLKMLLKTYGQ
NGHTHFGNDNFGPQEKTHQPKALPAINGVTCYANPAVTEANGHIHFDNVSVSLQDGKKEPSSCTCLKGPKLSEI
GTIAWMITLCDALHNFIDGLAIGASCTLSLLQGLSTSIAILCEEFPHELGDFVILLNAGMSTRQALLFNFLSACS
CYVGLAFGILVGNNFAPNIIIFALAGGMFLYISLADMFPPEMNDMLREKVTGRKTDFTFFMIQNAGMLTGFTAILLI
TLYAGEIELE

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FIGURE 644

GGGGCTACCGCGCCTTTGCTTCCTGGCGCACGCGGAGCCTCCTGGAGCCTGCCACCATCCTGCCTACTACGTGCT
GCCCTGCGCCCGCAGCCATGTGCCGCACCCTGGCCGCCTTCCCCACCACCTGCCTGGAGAGAGCCAAAGAGTTCA
AGACACGTCTGGGGATCTTTCTTCACAAATCAGAGCTGGGCTGCGATACTGGGAGTACTGGCAAGTCCGAGTGGG
GCAGTAAACACAGCAAAGAGAATAGAACTTCTCAGAAGATGTGCTGGGGTGGAGAGAGTCGTTTCGACCTGCTGC
TGAGCAGTAAAAATGGAGTGGCTGCCTTCCACGCTTTCTGAAGACAGAGTTTCAGTGAGGAGAACCTGGAGTTCT
GGCTGGCCTGTGAGGAGTTCAAGAAGATCCGATCAGCTACCAAGCTGGCCTCCAGGGCACACCAGATCTTTGAGG
AGTTCAATTTGCAGTGAGGCCCTAAAGAGGTCAACATTGACCATGAGACCCGCGAGCTGACGAGGATGAACCTGC
AGACTGCCACAGCCACATGCTTTGATGCGGCTCAGGGGAAGACACGTACCCCTGATGGAGAAGGACTCCTACCCAC
GCTTCTGAAGTCGCCTGCTTACCGGGACCTGGCTGCCCAAGCCTCAGCCGCCTCTGCCACTCTGTCCAGCTGCA
GCCTGGACGAGCCCTCACACACCTTGAGTCTCCACGGCAGTGAGGAAGCCAGCCGGGAAGAGAGGTTGAGTCACCC
ATCCCCGAGGTGGCTGCCCTGTGTGGGAGGCAGGTTCTGCAAAGCAAGTGCAAGAGGACAAAAA
AAAAAATGCGCTCCAGCAGCCTGTTTGGGAAGCAGCAGTCTCTCCTTCAGATACTGTGGGACTCATGCTG
GAGAGGAGCCGCCACTTCCAGGACCTGTGAATAAGGGCTAATGATGAGGGTTGGTGGGGCTCTCTGTGGGGCAA
AAAGGTGGTATGGGGTTAGCACTGGCTCTCGTTCTCACCGGAGAAGGAAGTGTCTAGTGTGGTTTAGGAAACA
TGTTGATAAAGGGAACCATGAAAATGAGAGGAGGAAAGACATCCAGATCAGCTGTTTTGCCCTGTGTCTCAGTTGA
CTCTGATTGCATCCTGTTTTCTTAATTCAGACTGTTCTGGGCACGGAAGGGACCCTGGATGTGGAGTCTTCCC
CTTTGGCCCTCCTCACTGGCCTCTGGGCTAGCCAGAGTCCCTTAGCTTGTACCTCGTAACACTCCTGTGTGTCT
GTCCAGCCTTGCAGTCATGTCAAGGCCAGCAAGCTGATGTGACTCTTGCCCCATGCGAGATATTTATACCTCAA
CACTGGCCTGTGAGCCCTTTCCAAGTCAGTGGAGAGCCCTGAAAGGAGGCTCACTTGAATCCAGCTCAGTGCTCT
GGGTGGCCCCCTGCAGGTGGCCCTGACCCTGCGTTGCAGCAGGGTCCACCTGTGAGCAGGCCCGCCCTGGGGCC
TCTTCTGGATGTGCCCTCTCTGAGTTCTGTGCTGTCTCTTGGAGGCAGGGCCAGGAGAACAAAGTGTGGAGGC
CTCGGGGAGTGGCTTTTCCAGCTCTCATGCCCCGAGTGTGGAACAAGGCAGAAAAGGATCCTAGGAAATAAGTC
TCTTGGCGGTCCCTGAGAGTCCTGCTGAAATCCAGCCAGTGTTTTTTGTGGTATGAGAACAGGCAAAAAGAGATG
CCCCGAGATAGAAGGGGAGCCTTGTGTTTCTTTCTGCGACGTGAGATGAACACTGGAGTGGGCAGAGGTGGCM
CAGGACCATGGCACCCCTTAGAGTGCAGAAGCTGGGGGAGAGGCTGCTTCGAAGGGCAGGACTGGGGATACCTGC
CTGTCACCTCAGGGCATCACTGAACAAACATTTCTGATGGSAACTCCTGCGGCAGAGCCCAGGCTGGGGAAGTG
AACTACCCAGGGCAGCCCCCTTTGTGGCCCAGGATAATCAACACTGTTCTCTGTACCATGAGCTCCTCCAGGAG
ATTATTTAAGTGTATTGTATCATTGGTTTTCTGTGATTGTGATAACATTGTTTTTGTATTGTTGGTGCTGTTGT
TATTTATTATTGTAATTTAGTTTGCCTCTACTGGAGAATCTCAGCAGGGGTTTCAGCCTGACTGTCTCCCTTTC
TCTACCAGACTCTACCTCTGAATGTGCTGGGAACCTCTTGGAGCCTGTGAGGAACCTCCTCACTGTTTAAATATTT
ATTTATTGTGACAAATGGAGCTGGTTTCCTAGATATGAATGATGTTTGCAATCCCCATTTTCTGTTCAGCATG
TTATATTCTTATAAAATAAAAGCAAAAGTCAAATATGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 645

MCRTLAAFPTTCLERAKEFKTRLGIFLHKSELGCDTGSTGKSEWGSKHSKENRNFSEDVLGWRESFDLLLSSKNG
VAAFHAFKTEFSEENLEFWLACEEFKKIRSATKLASRAHQIFEEFICSEAPKEVNIDHETRELTRMNLQTATAT
CFDAAQGKTRLMEKDSYPRFLKSPAYRDLAAQASAASATLSSCSLDEPSHT

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FIGURE 646

GGGGCTACCGCGCCTTTGCTTCCTGGCGCACGCGGAGCCTCCTGGAGCCTGCCACCATCCTGCCTACTACGTGCT
GCCCTGCGCCCGCAGCCATGTGCCGCACCCTGGCCGCCCTTCCCCACCACCTGCCTGGAGAGAGCCAAAGAGTTCA
AGACACGTCTGGGGATCTTTCTTCACAAATCAGAGCTGGGCTGCGATACTGGGAGTACTGGCAAGTCCGAGTGGG
GCAGTAAACACAGCAAAGAGAAATAGAACTTCTCAGAAGATGTGCTGGGGTGGAGAGAGTCGTTTCGACCTGCTGC
TGAGCAGTAAAAATGGAGTGGCTGCCCTTCCACGCTTTCTGAAGACAGAGTTCAGTGAGGAGAACCCTGGAGTTCT
GGCTGGCCTGTGAGGAGTTCAAGAAGATCCGATCAGCTACCAAGCTGGCCTCCAGGGCACACCAGATCTTTGAGG
AGTTCATTTGCAGTGAGGCCCTAAAGAGGTCAACATTGACCATGAGACCCGCGAGCTGACGAGGATGAACCTGC
AGACTGCCACAGCCACATGCTTTGATGCGGCTCAGGGGAAGACACGTACCCTGATGGAGAAGGACTCCTACCCAC
GCTTCCTGAAGTCGCCTGCTTACCGGGACCTGGCTGCCCAAGCCTCAGCCGCCTCTGCCACTCTGTCCAGCTGCA
GCCTGGACGAGCCCTCACACACCTGAGTCTCCACGGCAGTGAGGAAGCCAGCCGGGAAGAGAGGTTGAGTCACCC
ATCCCCGAGGTGGCTGCCCCCTGTGTGGGAGGCAGGTTCTGCAAAGCAAGTGCAAGAGGACAAAAA
AAAAAAAAAATGCGCTCCAGCAGCCTGTTTGGGAAGCAGCAGTCTCTCCTTCAGATACTGTGGGACTCATGCTG
GAGAGGAGCCGCCACTTCCAGGACCTGTGAATAAGGGCTAATGATGAGGGTTGGTGGGGCTCTCTGTGGGGCAA
AAAGGTGGTATGGGGGTTAGCACTGGCTCTCGTTCTCACCGGAGAAGGAAGTGTTCTAGTGTGGTTTAGGAAACA
TGTGGATAAAGGGAACCATGAAAATGAGAGGAGGAAAGACATCCAGATCAGCTGTTTTGCCTGTTGCTCAGTTGA
CTCTGATTGCATCCTGTTTTCTAATTCCCAGACTGTTCTGGGCACGGAAGGGACCCTGGATGTGGAGTCTTCCC
CTTTGGCCCTCCTCACTGGCCTCTGGGCTAGCCCAGAGTCCCTTAGCTTGACCTCGTAACACTCCTGTGTGTCT
GTCCAGCCTTGCACTCATGTCAAGGCCAGCAAGCTGATGTGACTCTTGCCCCATGCGAGATATTTATACCTCAA
CACTGGCCTGTGAGCCCTTTCCAAGTCAGTGGAGAGCCCTGAAAGGAGGCTCACTTGAATCCAGCTCAGTGCTCT
GGGTGGCCCCCTGCAGGTGGCCCTGACCCTGCGTTGCAGCAGGGTCCACCTGTGAGCAGGCCCGCCCTGGGGCC
TCTTCCTGGATGTGCCCTCTCTGAGTTCTGTGCTGTCTCTTGAGGCAGGGCCCAGGAGAACAAAGTGTGGAGGC
CTCGGGGAGTGGCTTTTCCAGCTCTCATGCCCCGAGTGTGGAACAAGGCAGAAAAGGATCCTAGGAAATAAGTC
TCTTGGCGGTCCCTGAGAGTCCTGTGAAATCCAGCCAGTGTTTTTTGTGGTATGAGAACAGGCAAAAAGAGATG
CCCCGAGATAGAAGGGGAGCCTTGTGTTTCTTTCTGACAGCTGAGATGAACACTGGAGTGGGCAGAGGTGGCM
CAGGACCATGGCACCCCTTAGAGTGCAAGCTGGGGGAGAGGCTGCTTCGAAGGGCAGGACTGGGGATACCTGC
CTGTACCTCAGGGCATCACTGAACAAACATTTCTGATGGSAACTCCTGCGGCAGAGCCCAGGCTGGGGAAAGTG
AACTACCCAGGGCAGCCCCCTTGTGGCCCAGGATAATCAACACTGTTCTCTGTACCATGAGCTCCTCCAGGAG
ATTATTTAAGTGTATTGTATCATTGGTTTTCTGTGATTGTCATAACATTGTTTTTGTATTGTTGGTGCTGTTGT
TATTTATTATTGTAATTTAGTTTGCCTCTACTGGAGAATCTCAGCAGGGGTTTCAGCCTGACTGTCTCCCTTTC
TCTACCAGACTCTACCTCTGAATGTGCTGGGAACCTCTTGAGCCTGTGAGGAACCTCCTCACTGTTTAAATATTT
ATTTATTGTGACAAATGGAGCTGGTTTCCTAGATATGAATGATGTTTGCAATCCCCATTTTCTGTTTCAGCATG
TTATATTCTTATAAAATAAAAGCAAAAGTCAAATATGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 647

MCRTLAAFPTTCLERAKEFKTRLGIFLHKSELGCDTGSTGKSEWGSKHSKENRNFSEDVLGWRESFDLLLSSKNG
VAAFHAFKTEFSEENLEFWLACEEFKKIRSATKLASRAHQIFEEFICSEAPKEVNIDHETRELTRMNLQTATAT
CFDAAQGKRTLMEKDSYPRFLKSPAYRDLAAQASAASATLSSCSLDEPSHT

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FIGURE 648

GAGCCCAGCCGAGCGTCCGCCGCTGCCCGTGCGCCTCTGCGCTCCGCGCCATGGCCGGCCTCAACTCCCTGGAGG
CGGTGAAACGCAAGATCCAGGCCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG
AGCTGGACGGCGAGCGCGAGCGGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG
TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTG
CAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTGAGG
AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG
TCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG
AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA
AATATGAAGAAGAAATTAACTTCTGTCTGACAACTGAAAGAGGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA
CGGTTGCAAACTGGAAAAGACAATTGATGACCTGGAAGAGAACTTGCCAGGCCAAAGAAGAGAACGTGGGCT
TACATCAGACACTGGATCAGACACTAAACGAACCTTAAGTATATGAGCAAAACAGAAGAGTCTTGTTCCAACAG
AAACTCTGGAGCTCCGTGGGTCTTTCTCTCTCTGTAAGAAGTTCCTTTTGTATTGCCATCTTCGCTTTGCTG
GAAATGTCAAGCAAATTATGAATACATGACCAAATATTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA
TTCTTCCCTTTTTTTTTTCAAATGGCACCAGCTTTTTCAGCTCTCTTATTTTTTCTTAAGTAGCATTTATTCCT
AAGGTAGGCAGGGTATTTCTAGTAAGCATACTTTCTTAAGACGGAGGCCATTTGGTTCTGGGAGAATAGGCAG
CCCCACACTTTGAAGAATACAGACCCCAGTATCTAGTCGTGGATATAATTAACCGCTGAAGACCATAACCTTTT
GGGTCAACTGTTGGTCAAATATAGGAGAGACCAGGGACCATCACATGGGTAGGGATTTTCCATCCAGAGCCAAT
AAAAGGACTGGTGGGGGCCGGGGTGGCTATTGTGGGAAGTCATAACCCACAGATAGATCAACCTAAGAATCCTG
GCCCTTCTCCACTCTCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA
TAATTACCCACATATAGTAATTAATAGATGGTAATTAATTGATCCTTGATGTGATGTTCTTTGCATATTTCTT
CATTCTAAAGTTGTTCCCTGGCCGGGAGCGTTTGCTTTCGCCTGTAATCCCAACACTTTGGGAGGCCAGGACAGA
TCACTTGAGGTCAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAATACAAAAATT
ATGGTGACGCCTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG
ACTGCAGTGAGCCGATATCGCACCACAGCGCTCCAGCCTGGTCGACAGAGTGAGACTCCATCTCAAGAAAAATA
AAAATAAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC
AGTCCAATTCAGGTCAGCCATATCCAAAAGACCACAAGTCACTACTAAGTTGAGCAAAAGAGTTTTTATCTATTA
GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAACTGGCCCAACTTCATTTCCATACTTCAGGGAACAGCAAA
TGAGGATTACTTATCTAGGACTT

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FIGURE 649

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ
KLEEAEKAADESERGMKVIENTRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEEAEVS
ELKCGDLEELKNVTNNLKSLEAASEKYSEKEDKYEEI KLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA
QAKEENVGLHQTL DQTLNELNCI

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FIGURE 650

GTCCTGCCGAGCTGTGAGGGCAACGGAGGGGAAATAAAAGGGAACGGCTCCGAATCTGCCCCAGCGGCCGCTGCG
AGACCTCGGCGCCGACATCGCGACAGCGAAGCGCTTTGCACGCCAGGAAGGTCCCCTCTATGTGCTGCTGAGCCG
GTCCTGGACGCGACGAGCCCGCCCTCGGTCTTCGGAGCAGAAATCGCAAAAACGGAAGGACTGGAAATGCGCAGAC
CATATGATGGCCATGAACCACGGGCGCTTCCCCGACGGCACCAATGGGCTGCACCATCACCTGCCCCACCGCATG
GGCATGGGGCAGTTCCCCGAGCCCCCATCACACCAGCAGCAGCAGCCCCAGCAGCCTTCAACGCCCTAATGGGC
GAGCACATACTACGGCGCGGGCAACATGAATGCCACGAGCGGCATCAGGCATGCGATGGGGCCGGGGACTGTG
AACGGAGGGCACCCCCGAGCGCGCTGGCCCCCGCGGCCAGGTTTAACAACCTCCAGTTTCATGGGTCCCCCGGTG
GCCAGCCAGGGAGGCTCCCTGCCGGCCAGCATGCAGCTGCAGAAGCTCAACAACCAGTATTTCAACCATCACCCC
TACCCCCACAACCACTACATGCCGGATTTGCACCTGCTGCAGGCCACCAGATGAACGGGACAAACCAGCACTTC
CGAGATTGCAACCCCAAGCACAGCGGCGGCAGCAGCAGCCCCGGCGGCTCGGGCGGCAGCAGCAGCCCCGGCGGC
TCTGGCAGCAGCTCGGGCGGCGGCGGGCAGCAGCAACAGCGGCGGCGGCAGCGGCAGCGGCAACATGCCCCGCC
TCCGTGGCCACGTCCCCGCTGCAATGCTGCCGCCCAATGTCATAGACACTGATTTTCATCGACGAGGAAGTTCTT
ATGTCCTTGGTGATAGAAATGGGTTTGGACCGCATCAAGGAGCTGCCCGAACTCTGGCTGGGGCAAAACGAGTTT
GATTTTATGACGGACTTCGTGTGCAAACAGCAGCCCAGCAGAGTGAGCTGTTGACTCGATCGAAACCCCGGCGAA
AGAAATCAAACCCCCAACTTCTTCGGCGTGAATTAAGAAACATTCCCTTAGACACAGTATCTCACTTTTCAGA
TCTTGAAAGGTTTGAAGACTTGGAACAAAGTAACTATAAACTTGTAACAATTGGTTTTAAAAAAAATTGCTGC
CACTTTTTTTTCTGTTTTTGTTCGTTTTTGTAGCCTTGACATTCACCCACCTCCCTTATGTAGTTGAAATATC
TAGCTAACTTGGTCTTTTTCGTTGTTTGTTCCTTCCCTCACTTTCTCCAGTGCTCAACTGTTAGATAT
TAATCTTGGCAAACCTGCTTAATCTTGTGGATTTTGTAGATGGTTTCAAATGACTGAAGTGCATTTCAGATTACGA
GTGAAAGGAAAAATTGCATTAGTTGGTTGCATGAACTTTGAAGGGCAGATATTACTGCACAACTGCCATCTCGC
TTCATTTTTTTAACTATGCATTTGAGTACAGACTAATTTTTTAAATATGCTAACTGGAAGATTAAACAGATGTG
GCCCCAACTGTTCTGGATCAGGAAAGTCATACTGTTCACTTTCAAGTTGGCTGTCCCCCGCGCCCCCCCCCA
CCCCCATATGTACAGATGATAATAGGGTGTGGAATGTCGTGAGTGGCAAACATTTACAGATTATTTGTTTCTG
TCTTCAACATTTTTGACACTGTGCTAATAGTTATATTCAGTACATGAAAAGATACTACTGTGTTGAAAGCCTTTT
AGGAAATTTTGACAGTATTTTTGTACAAAACATTTTTTGAAAAAATACTTGTTAATTTATTCTATTTTAATTG
CCAATGTCAATAAAAAGTTAAGAAATAAAAAAAAAAAAAAAAAA

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FIGURE 651

MADHMMAMNHGRFPDGTNGLHHHPAHRMGMGQFPSPHHHQQQQPQHAFNALMGEHIHYGAGNMNATSGIRHAMGP
GTVNGGHPPSALAPAARFNSQFMGPPVASQGGSLPASMQLQKLNNQYFNHHPYPHNHYMPDLHPAAGHQMNVTN
QHFRDCNPKHSGGSSTPGGSGGSSTPGGSGSSSGGGAGSSNSGGSGSGNMPASVAHVPAAMLPPNVIDTDFIDE
EVLMSLVIEMGLDRIKELPELWLGQNEFDFMTDFVCKQQPSRVSC

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FIGURE 652

AATCGCGAAAACCCGGCGAGCGGCGCGCTGGCTATCGAGCGAGCGGGGCGGAACCGGGAGTTGCGCCGCCGCTCGG
GCGCCGGGCTCCGTCGCGGCCGCGAGCCCCGCGGGTCGCCCTCCCGTGCCCTCGCCCGCGGACACCCTGGCCGTGGA
CACCTTGGCCGTGGGCACCCGCGGGGCGCGGGCGCTGCGCGGCGCGGCGGGCGGCATGAAGGTCACGTGCG
CTCGACGGGCGCCAGCTGCGCAAGATGCTCCGCAAGGAGGCGGCGGCGCGCTGCGTGGTGTCTCGACTGCCGGCCC
TATCTGGCCCTTCGCTGCCTCGAACGTGCGCGGCTCGCTCAACGTCAACCTCAACTCGGTGGTGTCTGCGGCGGGCC
CGGGGCGGCGCGGTGTGCGCGCGCTACGTGTGCCCCAGAGGCGGCGCGCGCGCGGCTCCTGCAGGAGGGCGGC
GGCGGCGTGCAGGCGGTGGTGGTGTGAGGAGGCGAGCGGCCACTGGCAGAAGCTGCGAGAGGAGAGCGCCGCG
CGTGTGCTCCTCACCTCGCTACTCGCTTGCCTACCCGCGGGCCCGCGGTCTACTTCTCAAAGGGGGATATGAG
ACTTTCTACTCGGAATATCCTGAGTGTGCGTGGATGTAAAACCCATTTTACAAGAGAAGATTGAGAGTGAGAGA
GCCCTCATCAGCCAGTGTGGAAGAACAGTGGTAAATGTCAGCTACAGGCCAGCTTATGACCAGGGTGGCCAGTT
GAAATCCTTCCCTTCTCTACCTTGGAAGTGCCTACCATGCATCCAAGTGCAGATTCTCTGCCAACTTGCACATC
ACAGCCCTGCTGAATGTCTCCCGACGGACCTCCGAGGCTGCATGACCCACCTACACTACAAATGGATCCCTGTG
GAAGACAGCCACACGGCTGACATTAGCTCCCACTTTCAAGAAGCAATAGACTTCATTGACTGTGTGAGGAAAAG
GGAGGCAAGGTCTTGGTCCACTGTGAGGCTGGGATCTCCCGTTACCCACCATCTGCATGGCTTACCTTATGAAG
ACCAAGCAGTTCCGCTGAAGGAGGCTTCGATTACATCAAGCAGAGGAGGAGCATGGTCTCGCCCAACTTTGGC
TTCATGGGCCAGCTCCTGCAGTACGAATCTGAGATCCTGCCCTCCACGCCCAACCCCGAGCTCCCTCCTGCCAA
GGGGAGGCGAGGCTCTTCACTGATAGGCCATTTGCAGACACTGAGCCCTGACATGCAGGCTGCTACTGCACA
TTCCCTGCCTCGGTGTGTCACCGGTGCCTACCCACTCAACAGTCTCAGAGCTCAGCAGAAGCCCTGTGGCAACG
GCCACATCCTGCTAAAACTGGGATGGAGGAATCGGCCCAGCCCCAAGAGCAACTGTGATTTTTGTTTTTAAGACT
CATGGACATTTTACATCCTGTGCAATACTGAAGACCTCATTCTGTGATGCTGCCCCAGTGAGATAGTGAGTGGTCA
CCAGGCTTGCAAATGAACCTTCAGACGGACCTCAGGGTAGGTTCTCGGGACTGAAGGAAGGCCAAGCCATTACGGG
AGCACAGCATGTGCTGACTACTGTACTTCCAGACCCCTGCCCTCTTGGGACTGCCAGTCTTGCACCTCAGAGT
TCGCCTTTTTCAATTTCAAGCATAAGCCAATAAATACCTGCAGCAACGTGGGAGAAAGAAGTTGCTGGACCAGGAGA
AAAGGCAGTTATGAAGCCAATTCATTTTGAAGGAAGCACAATTTCCACCTTATTTTTTGAACCTTGGCAGTTTCA
ATGTCTGTCTCTGTTGCTTCGGGGCATAAGCTGATACCGTCTAGTTGGGAAAGTCACCCTACAGGGTTTGTAGG
GACATGATCAGCATCCTGATTTGAACCTGAAATGTTGTGTAGACACCCTCTTGGGTCCAATGAGGTAGTTGGTT
GAAGTAGCAAGATGTTGGCTTTTCTGGATTTTTTTTGGCATGGGTTCTTCACTGACCTTGGACTTTGGCATGATT
CTTAGTCATACTTGAACCTGTCTCATTCCACCTCTTCTCAGAGCAACTCTTCTTTGGGAAAAGAGTTCTTCAGA
TCATAGACCAAAAAAGTCATACCTTCGAGGTGGTAGCAGTAGATTCCAGGAGGAGAAGGGTACTTGCTAGGTATC
CTGGGTCACTGGCGGTGCAAACTGGTTTCTCAGCTGCCTGTCCTTCTGTGTGCTTATGTCTCTTGTGACAATTG
TTTTCTCCCTGCCCTGGAGGTTGTCTTCAACTGTGGACTTCTGGGATTTGCAGATTTTGCAACGTGGTACTAC
TTTTTTTTCTTTTTGTCTGTTAGTTATTTCTCCAGGGGAAAAGGCAATAATTTTCTAAGACCCGTGTGAATGTGA
AGAAAAGCAGTATGTTACTGGTTGTTGTTGTTGTTCTTGTTTTTTATATGTAAAATAAAAAATAGTGAAAGGAG

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FIGURE 653

MKVTSLDGRQLRKMLRKEAAARCVVLD CRPYLAFAASNVRGSLNVNLNSVVLRRARGGAVSARYVLPDEAARARL
LQEGGGGVA'AVVVLDQGSRHWQKLREESAARVVLTSLLACLPA GPRVYFLKGGYETFYSEYPECCVDVKPISQEK
IESERALISQCGKPVVNVSYRPA YDQGGPVEILPFLYLGSAYHASKCEFLANLHITALLNVSRR TSEACMTHLHY
KWIPVEDSHTADISSHFQE AIDFIDCVREKGGKVLVHCEAGISRSPTICMAYLMKTKQFRLKEAFDYIKQRRSMV
SPNFGFMGQLLQYESEILPSTPNPQPPSCQGEAAGSSLIHLQTLSPDMQGAYCTFPASVLAPVPTHSTVSELSR
SPVATATSC

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FIGURE 654

GGCACGAGGAAGCTACTCAGATAAGAGGCTCCAAGAGGACATTTTTGGATGTGAAAAACAATGAGAAGGAGGACA
ACACACATTTACAATCGTCTTAATTTTGTACTCAGAAAAAGGATGTGAAGACAATGCACAGGGAATACAATAGTT
TCAGATCTGTGTACAGTTTCCTTTTGCTTCATCTCCTGCAACAATGTAATGAAGACACCATGATATCATTAAACAT
TTCACACAAAAGGAAAATGAGGCTGAAATGGTGTGGGCAAGGCCAGGAATCTGGAGCATCCCTAACCAAGCAGC
AGAGCACCTGGGATAGAGAAAGTGCTCAAGAATGTTCACTTACTGATTACTACAATCAAAAAAGATACGACACT
AATTTACCACATTCTTCTTACTTATTTTATGAGATACTATTCTTCCAAGGTGGAGAAAGTGGAGAAAGTAGAGTG
ACGCAGCTAAGGGAGTAAATCGACCCTCAGCCAACAAGTGGCAAAAGCCTGAAGAAAGTGATCAAGATCACTGAT
GACCCCGCGGCCCATCTCCAAGGGGGCGGGTATCACAACCCCGACGCCACACCACGTATCATTCCGCAAAACTCC
CGCGCCTCCACGCAGAACTGGCAAGAGGGAAGGCGAGACAGCAGTGAACAGCTGGTACGCAGCACCCACAGCAC
CGCGGCAGCAGCTAGTGCCGACTCCCGCCTAGCTCTTTTGACTCTGTTCGCGGGAAGAATGGGGAAACAGTAAGG
TTGCGGCGCCTCCCGCGAGACGAGGTACCTGAGGCTGGCCCCGCAGTCCCCCGCCGACCAGCACCGGAGCTTCA
CACCCCACTTCCGGGGTCAAGTCACCGCCGGAATCCTGTGATCGCAGAAAGGTAGTCTCAGGTTCCGCCCCCTAT
CCAAGTCCCGCCTCCACTGCCTCTCGCCCTGTATCTGTCAACTTCCGGGACGCCGCGCGTCACTAAGCAGCCAAT
CTCCACTTCCGGAATCATCCAGCCCCTTCTCCACCCCTTTCAGAGACAGCGCGATTGCGATTTAGGTTTCCGCGC
ATTTAATTGGCGAAGCTGGAGCGCTAGTCTTCGCTGATTGGTGCCGAGAAATCTGCCCCATAGACACCCGCGGGG
CGCACAGTTTCAGTCGTCCGTGGTTTTCCCGCCAGCCGAGTCTTGACCATAATCATGTTGGACATGATGGACT
TGCCCAGGTCGCGCATCAACGCCGGCATGCTAGCTCAATTCATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGG
AAAAGATTCATCCACCGGAAAAATGTTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATCGAGTTGATGG
AACCCCTTGATGAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTAACCGCCAAGGCCACCATCTTGTGTA
CATCTTATGTCCAGTTTAAAGAAGATAGCCATCCTTTTGATCTTGGACTTTACAATGAAGCTGTGAAAATTATCC
ATGACTTCCCTCAGTTTTATCCTTTAGGGATTGTGCAACATGATTCATCTTGTATGGATTTTCATACGATTGTAAA
TGAGCTATATTAAAGTCTATTAAAGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 655

MVDMMDLPRSRINAGMLAQFIDKPVCFVGRLEKIHPTGKMFILSDGEGKNGTIELMEPLDEEISGIVEVVGRVTA
KATILCTSYVQFKEDSHPFDLGLYNEAVKIIHDFPQFYPLGIVQHD

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FIGURE 656

AGCCGCCGCTCGCCGCTTCCCCTCGTCGGAGCGGCCGCTCGTCCGCCCGGCTTGAGGCCCGCGGGGAGCGCGGC
GCAATTCGTGCGGCCCGCGGGGGGGCGGCCCTCCCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGG
CTGGGATGCGCGTCCGCGGCCCGCGAGTACAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGC
ACTGGCCGGCCCCGATTGATGAACTCCCAGAGGGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTT
TTGGCACCCATGAAACTGCATTTCTAGGTCCCAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAA
AGTCAAAACAAACGGAAAGGATTTAACGAAGGATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCT
ACCAGGCAATTCAGCAACAGAGCTCTTCAGAACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGG
AAGAAGGTGATAGAGTAGAAGAAGATGGAAAAGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGT
CATATACTTCAAAGAAATCCTCTAAACAGTCCCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAG
AGGAAAACAAAGCAGCTCTGAGGGTGGAGATGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGCAAAAA
CCAGTGAAGGGACCTAACTACCATAATGAATGCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTG
TCTAATATTCTTGATTTGATATGAACCAACACATAGTCCTTGTGTGTCATTGACAGAACCCCACTTTGTATGTAC
ATTATTCATATTCCTCTCTGTGTGTTTTCGGGGGAAAAGACATTTTAGCCTTTTTTAAAAGTTACTGATTTAAT
TTCATGTTATTTGGTTGCATGAAGTTGCCCTTAACCACTAAGGATTATCAAGATTTTTCGCGAGACTTATACATG
TCTAGGATCCTTTTATCAAGGCAGTTATGATCATCGTTTTCTGCCTTGACCCCACTCATCAACACTCAGTT
AAATATAAATTAACATTTTTTAGATGACCACTCAACATAATGCTTAAGAATGGAATTTCTCTCTGTGACAGAAC
CCAGGAATTAATTCCTAAATACATAACGTTGGTATATTGAAGACGAAATTAATTTGTCCTTCAGTTTTGAGGCC
ATGTGTAAAGTTTAACCATATTGTAATATCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCA
AAATTCATATTGTTATGTACACAACTAAGTTTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAT
AAAGGCAATGATTTATTTTTTCCAGTGCCAATACAATTTTGAGCTAAGCACTCAAGGTGGATACTTTACATTT
TAAAGCTGGAATCAGCAACAGCCCTATGGGAAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAA
ACTGTTTTCTTTTGGAACTACAATTAGAATAGTTAATATTATCCTTAACCATTTATTATGTGTACATTATTGTT
GCTATTGTGATAATAGAGAATTTTATTTATTTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGG
TTTTATCAATCCTGTAAATGCTTGTCTTGGAAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTG
TAAAAAATCAAAAAACAAAAAATGATTGTTTTTACAGAATAAATTTATTGGGATGTGTACTGGGAGTAAGATT
TGAGGTTGTAAGCAAACTAAGTTAGTGTAATTTGGCTTCATATATGTAACGTGAGGTATTAATGTAATTCATATA
TTAAAGCAAAAAATTGTTTCGCAGC

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FIGURE 657

MARPRPREYKAGDLVFAKMGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPVKFTGYQAIQQSSSETEGEGGNTADASSEEGDRVEEDGKGKRKNEKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEEENKSSSEGGDAGNDTRNTTSDLQKTSEGT

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FIGURE 658

AGCCGCCGCTCGCCGCTTCCCCTCGTCGGAGCGGCGGCTCGTCCGCCCGGCTTGAGGCCCGCGGGAGCGCGGC
GCAATTCGTCCGCCCCGCGGGGGGCGGCCTCCCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGG
CTGGGATGGCGCGTCCGCGGCCCCGCGAGTACAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGC
ACTGGCCGGCCCCGGATTGATGAACTCCCAGAGGGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTT
TTGGCACCCATGAACTGCATTTCTAGGTCCCAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAA
AGTCAAACAAACGGAAAGGATTTAACGAAGGATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCT
ACCAGGCAATTCAGCAACAGAGCTCTTCAGAACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGG
AAGAAGGTGATAGAGTAGAAGAAGATGGAAAAGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGT
CATATACTTCAAAGAAATCCTCTAAACAGTCCCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAG
AGGAAAACAAAAGCAGCTCTGAGGGTGGAGATGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGCAAAAA
CCAGTGAAGGGACCTAACTACCATAATGAATGCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTG
TCTAATATTCTTGGATTTGATATGAACCAACACATAGTCCTTGTTGTCATTGACAGAACCCAGTTTGTATGTAC
ATTATTCATATTCTCTCTGTTGTGTTTCGGGGGAAAAGACATTTTAGCCTTTTTTAAAGTTACTGATTTAAT
TTCAIGTTATTTGGTTGCATGAAGTTGCCCTTAACCACTAAGGATTATCAAGATTTTTCGCGCAGACTTATACATG
TCTAGGATCCTTTTTATCAAGGCAGTTATGATCATCGTTTTCTGCCTTGACCCACCATCATCAAACACTCAGTT
AAATATAAATTAACATTTTTTAGATGACCACTCAACATAATGCTTAAGAATGGAATTCCTCTCTGTGACAGAAC
CCAGGAATTAATTCCTAAATACATAACGTTGGTATATTGAAGACGAAATTAATTTGTCCTTCAGTTTTGAGGCC
ATGTGTAAAGTTTAACCATATTGTAAAATATCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCA
AAATTCATATTGTTATGTACACAACTAAGTTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAT
AAAGGCAATGATTTATTTTTTTCCAGTGCCAATACAATTTGAGCTAAGCACTCAAGGTGGATACTTTACATTT
TAAAGCTGGAATCAGCAACAGCCCTATGGGAAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAA
ACTGTTTTCTTTTGGAATAACAATTAGAATAGTTAATATTCATCCTTAAACCATTATTATGTGTACATTATTGTT
GCTATTGTGATAATAGAGAATTTTATTTATTTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGG
TTTTATCAATCCTGTAAATGCTTGTCTTGGAAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTG
TAAAAAATCAAAAACAAAAAATGTATTGTTTTTACAGAATAAATTTATTGGGATGTGTACTGGGAGTAAGATT
TGAGGTTGTAAGCAAATAAGTTAGTGTAAATTTGGCTTCATATATGTAACGTGAGGTATTAATGTAATTCATATA
TTAAAGCAAAAATTGTTTCGCAGC

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FIGURE 659

MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPVGKFTGYQAIQQQSSSETEGEGGNTADASSEEGDRVEEDGKGKGRKNEKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEEENKSSSEGGDAGNDRNTTSDLQKTSEGT

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FIGURE 660A

CCGTTACGCGTTTCGGTCCCTTGGCTGACTCACCGCCCTCGCCGCCGCACC**ATGG**ACGCCCCCAGGCAGGTGG
TCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTTGTTAGAGATACAAAAGGAATTATTAGACTACA
AAGGAGTTGGCATTAGTGTCTTGAAATGAGTCACAGGTCATCAGATTTTGCCAAGATTATTAACAATACAGAGA
ATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACTATAAGGTGATTTTTCTGCAAGGAGGTGGGTGCGGCCAGT
TCAGTGCTGTCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCTGACTATGTGGTGACAGGAGCTTGGT
CAGCTAAGGCCGCAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCACCTAAACTTGGGAGTTATACAA
AAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCCTCTACGTGTATTATTGCGCAAATGAGACGGTGC
ATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTGTGACATGTCCTCAAACCTCCTGT
CCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAAGAATGTTGGCTCTGCTGGGGTCA
CCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCCTCGGTCTGGAATACAAGGTGC
AGGCTGGAAACAGTCCCTTGTACAACACGCCTCCATGTTTACGATCTACGTCATGGGCTTGGTTCTGGAGTGA
TTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATCTCAAACAATTTATGAGATTATTG
ATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAAGATGAATATTCCATTCCGCATTG
GCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCTTGAACCAATATGTTGTCCTTGA
AAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCACAATTGAAGACGTTTCAAGCTGG
CCGCTTCATGAAAAAATTTTTGGAGATGCATCAGCTA**TGAA**CACATCCTAACCCAGGATATACTCTGTTCTTGAA
CAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAGTATTTTTCTCAAATGAACATGTT
TATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCTGTAAAGCTGGTGGGACCTAATGT
CACCTTAATTCTGACTTGAACGGAAGCATTTTAAAGAAATCTTGTGCTTTTTCTAACAAATTCGCCGTATTTTG
CCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTTGCTGTGGACTTAATAATGCAAGTTGCGATTAAATTATT
TCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGCTGAATCTACACATCTGTGGGGTC
TCCTGGGTTTCAAGTGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGTGGTTTAAAGAGTGCCAGGCGAAGG
GCAAACTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTTTATATATGTTTATATTAGCAAGG
TCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATAATACAGTTATCACTGATATATGT
AGACACTTTTAGAATTTATTAATCCTTGACCTTGTGCATTATAGCATTCCATTAGCAAGAGTTGTACCCCTCC
CCAGTCTTCGCCCTTCCCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGTTCTTGATTCATTTTTACCATTCT
TTCCATAGGTAGAAGAGAAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCATTAACTAAACATTTCTGTAA
TTACCTATCCCTTGTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGAGTGATACTTTGCTGAAAAGTCTT
TCCCCTATTGTTTATCTATTGTGCTAGTATTTTATGTTGAATATGTAAAGAACATTAAAGTCTTAAACACGGTTCTA
AGCTAAGTGAAGGGGAAGATCTGAGAGCGTGCTGTTTGTGGCTGTTGATGCATATTCGTGATGTAACAGGTCTTG
GGGCTCACTTTACCCCATTTGTAAATGGGGCTAATGTACCTGCCTCTTACCTACCTCAGAGGGATTGGTGA
AGCAAACTGTTAATCTTCGAAAACGACCATTTCACTTCTTGGATATCAAGTGCTAACCAGTATGTTCTTCTTTT
TTATGTAAGGGACAGCTTTTCTCCACAGAGTCTTTCTGCTGGTGAGGACAGCATTTCTGAGCAGGGCTTTGTTCT
CTATGTGCATTAGGACTTTTATCATGCCCTTGTCTGTGTGTAGTTACTTGACAGCATCAAATGCCGCCTCTTCC
TAATGTCCTTCAAGTTTTCATGAACCTAGCAACCCACCTTCCACCATGGTTCTGGGCGCCTGATTTTGCTGTGAC
TCCCAGACCCAGCCACTGTTTCTGCCACCTGTAAACAGGCCATTAAAGCTCCCCAGTGTTTCCAGCTCCTTCACTC
CCTTGTTTTCCCTGTTGCTATGTGTACCTGGGCCCTACAGACAGGGGCACACGCTTATGGATGTGTGTACCATT
GAGATGAGAATGGGTAGATGGAACGGAGACCATCAAGCCACACCCCTTCTTAAAACTGGGGACATGAGCCTGAG
CAGAAAGGGTGAAGAAGAGCCATGGGACACAGAGTTGACCCAGCCAGGGGGAAAGCCAGCTCTCTTTAAACCAG
CTAAGCCATTCCAGTCTCCTGTGAAGCCAAAAGGGACCAGGAACCGTGCAAAGGAAACTGGAAACTTTTCCCGC
TGGGTAGAGCATGTTGCTGATACTCTTCTGTTTTCAAGGGAAACAATCACATTGTTTGATTCCAAATGGTAAATG
AACACTCACTATTCTTCAGGCTTCAGTAAATCTTTTTTCTTCCCTCATATATATATACACAACACACACACA
TATGTATATCTATACACACATGTGTGTTGTGTATATGCATGTGTGTGTGCGTGTGTATAGTTTTAGCTCCA
AGCCAAGCAAGTTTGTGTTTGGATAGAGGGGAACCTTAACTATTAACATAAGTTGTATGTCTGTGGTATCTTGAT
TTTCCCATTCTTAAAGATGAATTTACAAAAGCCATAAAGCGTGAAATTAGAGCTGGACTTAAGACTCATTGGCCG
ACCATCCTGTGTCTTGGCCTGGCCCTGCAGTAAGAAGCGTGTCTGGGTCTGGAGAAGGGTGCTCCGAGAGTGTG
CAGGTGGCCCTTCCCTTGGAGGCGAGAAGAGAGAATGTGCTGTCTATCTTCCCTGGTTTTAGTCCACAGAGTCG
GTAGACCAGGGGTTACGTGACTGGGGAAATCTCACATCTCCTTGTCTGAAAACATTCCCCTGCTGTTCTCTTT

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FIGURE 660B

CTAACATGTTGTGGTAAATCTGTTTCAGATACTGCTCATCTGACTGTTTTGTACATGTGACAATTGCCTTAAACC
TAGCACAGTCCTCAGAAATGAATACCGTGTTTCCACTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 661

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQNKGVSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRSVGGIRASLYNAVTTIEDVQKLAAFMKKFLEMHQL

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FIGURE 662

ACTTTCCTGCCCCCTTCCCCGGCCAAGCCCCAACTCCGGATCTCGCTCTCCACCGGATCTCACCCGCCACACCCGGA
CAGGCGGCTGGAGGAGGCGGGCGTCTAAAATTCTGGGAAGCAGAACCTGGCCGGAGCCACTAGACAGAGCCGGGC
CTAGCCCAGAGACATGGAGAGTTGCTACAACCCAGGTCTGGATGGTATTATTGAATATGATGATTTCAAATTGAA
CTCTCCATTGTGGAACCCAAGGAGCCAGCCCCAGAAACAGCTGATGGCCCTACCTGGTGATCGTGGAACAGCC
TAAGCAGAGAGGCTTCCGATTTTCGATATGGCTGTGAAGGCCCTCCCATGGAGGACTGCCCCGTGCCTCCAGTGA
GAAGGGCCGAAAGACCTATCCCACTGTCAAGATCTGTAACCTACGAGGGACCAGCCAAGATCGAGGTGGACCTGGT
AACACACAGTGACCCACCTCGTGCTCATGCCCACAGTCTGGTGGGCAAGCAATGCTCGGAGCTGGGGATCTGCGC
CGTTTCTGTGGGGCCCAAGGACATGACTGCCCAATTTAAACACCTGGGTGTCTGCATGTGACTAAGAAGAACAT
GATGGGACTATGATACAAAACCTTCAGAGGCAGCGGCTCCGCTCTAGGCCCCAGGGCCTTACGGAGGCCGAGCA
GCGGGAGCTGGAGCAAGAGGCCAAAGAACTGAAGAAGGTGATGGATCTGAGTATAGTGC GGCTGCGCTTCTCTGC
CTTCTTAGAGCCAGTGATGGCTCCTTCTCCCTGCCCCCTGAAGCCAGTCACCTCCCAGCCCATCCATGATAGCAA
ATCTCCGGGGCATCAAACCTGAAGATTTCTCGAATGGACAAGACAGCAGGCTCTGTGCGGGGTGGAGATGAAGT
TTATCTGCTTTGTGACAAGGTGCAGAAAGATGACATTGAGGTTCTGGTTCTATGAGGATGATGAGAATGGATGGCA
GGCCTTTGGGGACTTCTCTCCACAGATGTGCATAAACAGTATGCCATTGTGTTCCGGACACCCCCCTATCACAA
GATGAAGATTGAGCGGCTGTAAACAGTGTCTGCAACTGAAACGCAAGCGAGGAGGGGACGTGTCTGATTCCAA
ACAGTTCACCTATTACCCTCTGGTGGAAGACAAGGAAGAGGTGCAGCGGAAGCGGAGGAAGGCCTTGCCACCTT
CTCCCAGCCCTTCGGGGGTGGCTCCACATGGGTGGAGGCTCTGGGGGTGCAGCCGGGGGCTACGGAGGAGCTGG
AGGAGGTGGCAGCCTCGGTTTCTTCCCCTCTCCCTGGCCTACAGCCCTACCAGTCCGGCGCGGGGCCCATGCG
GTGCTACCCGGGAGGCGGGGGCGGGGCGCAGATGGCCGCCACGGTGCCAGCAGGGACTCCGGGGAGGAAGCCGC
GGAGCCGAGCGCCCCCTCCAGGACCCCCCAGTGCGAGCCGCAGGCCCCGGAGATGCTGCAGCGAGCTCGAGAGTA
CAACGCGCGCCTGTTTCGGCTGGCGCACGCAGCCCCGAGCCCTACTCGACTACTGCGTACC GCGGACGCCGCGC
GCTGCTGGCGGGACAGCGCCACCTGCTGACGGCGCAGGACGAGAACGGAGACACACCCTGCACCTAGCCATCAT
CCACGGGCAGACCAGTGTCTATTGAGCAGATAGTCTATGTCTATCCACCACGCCCAGGACCTCGGCGTTGTCAACCT
CACCAACCACCTGCACCAGACGCCCTGCACCTGGCGGTGATCACGGGGCAGACGAGTGTGGTGAGCTTTCTGCT
GCGGGTAGGTGCAGACCCAGCTCTGCTGGATCGGCATGGAGACTCAGCCATGCATCTGGCGCTGCGGGCAGGCGC
TGGTGCTCCTGAGCTGCTGCGTGCACTGCTTCAGAGTGGAGCTCCTGCTGTGCCCCAGCTGTTGCATATGCCTGA
CTTTGAGGGACTGTATCCAGTACACCTGGCGGTCCGAGCCCCAAGCCCTGAGTGCCTGGATCTGCTGGTGACAG
TGGGGCTGAAGTGGAGGCCACAGAGCGGCAGGGGGGACGAACAGCCTTGCACTTAGCCACAGAGATGGAGGAGCT
GGGGTTGGTCACCCATCTGGTCACCAAGCTCCGGGCCAACGTGAACGCTCGCACCTTTGCGGGAAACACACCCCT
GCACCTGGCAGCTGGACTGGGGTACCCGACCCTCACCCGCTCCTTCTGAAGGCTGGTGCTGACATCCATGCTGA
AAACGAGGAGCCCCCTGTGCCCACTGCCTTCACCCCTACCTCTGATAGCGACTCGGACTCTGAAGGGCCTGAGAA
GGACACCCGAAGCAGCTTCCGGGGCCACACGCCTCTTGACCTCACTTGACAGACCTTGGTGAAGACCTTGCTGCT
AAATGCTGCTCAGAACACCATGGAGCCACCCCTGACCCCGCCCAGCCAGCAGGGCCGGGACTGTCACTTGGTGA
TACAGCTCTGCAGAACCTGGAGCAGCTGCTAGACGGGCCAGAAGCCCAGGGCAGCTGGGCAGAGCTGGCAGAGCG
TCTGGGGCTGCGCAGCCTGGTAGACACGTACCGACAGACAACCTCACCCAGTGGCAGCCTCCTGCGCAGCTACGA
GCTGGCTGGCGGGGACCTGGCAGGTCTACTGGAGGCCCTGTCTGACATGGGCCTAGAGGAGGGAGTGAGGCTGCT
GAGGGGTCCAGAAACCCGAGACAAGCTGCCCAGCACAGAGGTGAAGGAAGACAGTGCGTACGGGAGCCAGTCAGT
GGAGCAGGAGGCAGAGAAGCTGGGCCCACCCCTGAGCCACCAGGAGGGCTCTCGCACGGGGACCCCCAGCCTCA
GGTGA CTGACCTGCTGCTGCCCCAGCCCCCTTCCCGGACCCCTGTACAGCGTCCCCACCTATTTCAAATCTT
ATTTAACACCCACACCCACCCCTCAGTTGGGACAAATAAAGGATTCTCATGGGAAGGGGAGGACCCCGAATTCC
T

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FIGURE 663

MESCYNPGLDGIIEYDDFKLNSSIVEPKEPAPETADGPYLVIVEQPKQRGFRFRYGCCEGFSHGGLPGASSEKGRK
TYPTVKICNYEGPAKIEVDLVTHSDPPRAHAHSLVGKQCSELGICAVSVGPKDMTAQFNNLGVLVHTKKNMMGMTM
IQKLQRQLRSRPQGLTEAEQRELEQEAKELKKVMDLSIVRLRFS AFLRASDGFSFSLPLKPVTSQPIHDSKSPGA
SNLKISRMDKTAGSVRGGDEVYLLCDKVQKDDIEVRFYEDDENGWQAFGDFSPTDVHKQYAIIVFRTPPYHKMKIE
RPVTVFLQLKRKRGGDVSDSKQFTYYPLVEDKEEVQRKRRKALPTFSQPFGGGSHMGGGSGGAAGGYGGAGGGGS
LGFFPSSLAYSPIYQSGAGPMRCYPGGGGGAQMAATVPSRDSGEEAAEPSAPSRTPOCEPQAPEMLQRAREYNARL
FGLAHAAPSPTRLLRHRGRRALLAGQRHLLTAQDENGDTPLHLAIIHGQTSVIEQIVYVIHHAQDLGVVNLTNHL
HQTPLHLAVITGQTSVVSFLLRVGADPALLDRHGDSAMHLALRAGAGAPELLRALLQSGAPAVPQLLHMPDFEGL
YPVHLAVRARSPECLDLLVDSGAEVEATERQGGRTALHLATEMEELGLVTHLVTKLRANVNARTFAGNTPLHLAA
GLGYPTLTRLLLKAGADIHAENEEPLCPLSPPTSDSDSDSEGPEKDTRSSFRGHTPLDLTCSTLVKTLNNAQ
NTMEPPLTPPSPAGPGLSLGDTALQNLQLLDGPEAQGSWAELAERLGLRSLVD TYRQTTSPSGSLLRSYELAGG
DLAGLLEALS DMGLEEGVRLLRGPETRDKLPSTEVKEDSAYGSQSVEQEA EKLGPPEPPPGGLSHGHPQPQVTDL
LPAPSPLPGPPVQRPHLFQILFNTPHPPLSWDK

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FIGURE 664

TTCTAGTTTTCGGTTTCAGGTTTTCGCGCTGCCGGCCAGCGTCCCTCTGGCCATGGACACCCCGGAAAATGTCCTTCA
GATGCTTGAAGCCCACATGCAGAGCTACAAGGGCAATGACCCCTCTGGTGAATGGGAAAGATACATACAGTGGGT
AGAAGAGAATTTTCTGAGAATAAAGAATACTTGATAACTTTACTAGAACATTTAATGAAGGAATTTTGTAGATAA
GAAGAAATACCACAATGACCCAAGATTTCATCAGTTATTGTTTTAAATTTGCTGAGTACAACAGTGACCTCCATCA
ATTTTTTGAGTTTCTGTACAACCATGGGATTGGAACCTGTCTATCCCTCTGTACATTGCCTGGGCGGGGCATCT
GGAAGCCCCAAGGAGAGCTGCAGCATGCCAGTGCTGTCTTCAGAGAGGAATTCAAACCAGGCTGAACCCAGAGA
GTTCTGTCAACAACAATACAGGTTATTTTCAGACACGCTCTCACTGAAACCCATTTGCCAGCTCAAGCTAGAACCCTC
AGAACCTCTGCATAATGTTTCAGGTTTTAAATCAAATGATAACATCAAATCAAATCCAGGAAATAACATGGCCTG
CATTTCTAAGAATCAGGGTTTCAGAGCTTTCTGGAGTGATATCTTCAGCTTGTGATAAAGAGTCAAATATGGAACG
AAGAGTGATCAGATTTCTAAATCAGAATATCTGTGCACTCATCTTTGGCATCCAAAGTTGATGTTGAGCAGGT
TGTTATGTATTGCAAGGAGAAGCTTATTCGTGGGGAATCAGAATTTTCTTTGAAGAATTGAGAGCCCAGAAATA
CAATCAACGGAGAAAGCATGAGCAATGGGTAAATGAAGACAGACATTATATGAAAAGGAAAGAAGCAAATGCTTT
TGAAGAACAGCTATTAAACAGAAAATGGATGAACTTCATAAGAAGTTGCATCAGGTGGTGGAGACATCCCATGA
GGATCTGCCCGCTTCCAGGAAAGGTCCGAGGTTAATCCAGCACGTATGGGGCCAAGTGTAGGCTCCAGCAGGA
ACTGAGAGCGCCATGTCTTCCAGTAACCTATCAGCAGACACCAGTGAACATGGAAGAAGCCCAAGAGAGGCACC
TCCTGTTGTTCTCTCTTTGGCAAATGCTATTTCTGCAGCTTTGGTGTCCCCAGCCACCAGCCAGAGCATTGCTCC
TCCTGTTCTCTTTGAAAGCCCAGACAGTAACAGACTCCATGTTTGCAGTGGCCAGCAAAGATGCTGGATGTGTGAA
TAAGAGTACTCATGAATTCAGCCACAGAGTGGAGCAGAGATCAAAGAAGGGTGTGAAACACATAAGGTTGCCAA
CACAAGTTCTTTTACACAACCTCCAAACACATCACTGGGAATGGTTTCAGGCAACGCCATCCAAAGTGCAGCCATC
ACCCACCGTGCACACAAAAGAAGCATTAGGTTTCATCATGAATATGTTTCAGGCTCCTACACTTCCTGATATTTT
TGATGACAAAGATGAATGGCAATCTCTAGATCAAAATGAAGATGCATTTGAAGCCCAGTTTCAAAAAAATGTAAG
GTCATCTGGGGCTTGGGGAGTCAATAAGATCATCTCTCTTTGTCATCTGCTTTTTCATGTGTTTGAAGATGGAAA
CAAAGAAAATTATGGATTACCACAGCCTAAAAATAAACCCACAGGAGCCAGGACCTTTGGAGAACGCTCTGTCTAG
CAGACTTCCTTCAAAACCAAAGGAGGAAGTGCCTCATGCTGAAGAGTTTTTGGATGACTCAACTGTATGGGGTAT
TCGCTGCAACAAAACCCCTGGCACCCAGTCCCTAAGAGCCCAGGAGACTTCACATCTGCTGCACAACTTGCCTCTAC
ACCATTCCACAAGCTTCCAGTGGAGTCACTGCACATTTTAGAAGATAAAGAAAATGTGGTAGCAAAACAGTGTAC
CCAGGCGACTTTGGATTCTTGTGAGGAAAACATGGTGGTGCCTTCAAGGGATGGAAAATTCAGTCCAATTCAAGA
GAAAAGCCCCAAAACAGGCCTTGTCTCTCACATGTATTTCAGCATCCTTACTTCGTCTGAGCCAGCCTGCTGCAGG
TGGGGTACTTACCTGTGAGGCAGAGTTGGGCGTTGAGGCTTGCAGACTCACAGACACTGACGCTGCCATTGCAGA
AGATCCACCAGATGCTATTGCTGGGCTCCAAGCAGAATGGATGCAGATGAGTTCACTTGGGACTGTTGATGCTCC
AACTTTCATTGTTGGGAACCCATGGGATGATAAGCTGATTTTCAAACCTTTTATCTGGGCTTTCTAAACCAGTGAG
TTCCTATCCAAATACTTTTGAATGGCAATGTAACTTCCAGCCATCAAGCCCAAGACTGAATTTCAATTGGGTTC
TAAGCTGGTCTATGTCCATCACCTTCTTGAGAGAAGGAGCCTTTGCCAGGTGTACGAAGCTACCCAGGGAGATCT
GAATGATGCTAAAAATAAACAGAAATTTGTTTTAAAGGTCCAAAGCCTGCCAACCCTGGGAATTCTACATTGG
GACCCAGTTGATGGAAAGACTAAAGCCATCTATGCAGCACATGTTTATGAAGTTCTATTCTGCCCACTTATTCCA
GAATGGCAGTGTATTAGTAGGAGAGCTCTACAGCTATGGAACATTATTAATGCCATTAACCTCTATAAAAAATAC
CCCTGAAAAGTGTATGCCTCAAGGTCTTGTCTATCTCTTTTGCTATGAGAATGCTTTACATGATTGAGCAAGTGCA
TGACTGTGAAATCATTCATGGAGACATTAAACCAGACAATTTTCACTTGGAAACGGATTTTGGAAACAGGATGA
TGAAGATGATTTATCTGCTGGCTTGGCACTGATTGACCTGGGTGAGATATAGATATGAAACTTTTCCAAAAGG
AACTATATTACAGCAAAGTGTGAAACATCTGGTTTTTCAGTGTGTTGAGATGCTCAGCAACAAACCATGGAACCTA
CCAGATCGATTACTTTGGGGTGTCTGCAACAGTATATTGCATGCTCTTTGGCACTTACATGAAAGTGAAAAATGA
AGGAGGAGAGTGTAAAGCCTGAAGGTCTTTTTAGAGGCTTCCTCATTTGGATATGTGGAATGAATTTTTTCATGT
TATGTTGAATATTCCAGATTGTCTATCTTCCATCTTTGGATTTGTTAAGGCAAAAGCTGAAGAAAGTATTTCA
ACAACACTATACTAAACAAGATTAGGGCCCTACGTAATAGGCTAATTGTACTGCTCTTAGAATGTAAGCGTTACAG
AAAATAAAATTTGGATATAGACAGTCTTAAATAACACTGTAAATATGAATCTGCTCACTTTAAACCTGTTTT
TTTTTCATTTATTGTTTATGTAAATGTTTGTAAAAATAAATCCCATGGAATATTTCCATGTAAAAA

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FIGURE 665

MDTPENVLQMLEAHMQSYKGN DPLGEWERYIQWVEENFPENKEYLITLLEHLMKEFLDKKKYHNDPRFISYCLKF
AEYN S D L H Q F F E F L Y N H G I G T L S S P L Y I A W A G H L E A Q G E L Q H A S A V L Q R G I Q N Q A E P R E F L Q Q Q Y R L F Q T R L T E T
H L P A Q A R T S E P L H N V Q V L N Q M I T S K S N P G N N M A C I S K N Q G S E L S G V I S S A C D K E S N M E R R V I T I S K S E Y S V H S S L
A S K V D V E Q V V M Y C K E K L I R G E S E F S F E E L R A Q K Y N Q R R K H E Q W V N E D R H Y M K R K E A N A F E E Q L L K Q K M D E L H K K L
H Q V V E T S H E D L P A S Q E R S E V N P A R M G P S V G S Q Q E L R A P C L P V T Y Q Q T P V N M E K N P R E A P P V V P P L A N A I S A A L V S
P A T S Q S I A P P V P L K A Q T V T D S M F A V A S K D A G C V N K S T H E F K P Q S G A E I K E G C E T H K V A N T S S F H T P N T S L G M V Q
A T P S K V Q P S P T V H T K E A L G F I M N M F Q A P T L P D I S D D K D E W Q S L D Q N E D A F E A Q F Q K N V R S S G A W G V N K I I S S L S S
A F H V F E D G N K E N Y G L P Q P K N K P T G A R T F G E R S V S R L P S K P K E E V P H A E E F L D D S T V W G I R C N K T L A P S P K S P G D F
T S A A Q L A S T P F H K L P V E S V H I L E D K E N V V A K Q C T Q A T L D S C E E N M V V P S R D G K F S P I Q E K S P K Q A L S S H M Y S A S L
L R L S Q P A A G G V L T C E A E L G V E A C R L T D T D A A I A E D P P D A I A G L Q A E W M Q M S S L G T V D A P N F I V G N P W D D K L I F K L
L S G L S K P V S S Y P N T F E W Q C K L P A I K P K T E F Q L G S K L V Y V H H L L G E G A F A Q V Y E A T Q G D L N D A K N K Q K F V L K V Q K P
A N P W E F Y I G T Q L M E R L K P S M Q H M F M K F Y S A H L F Q N G S V L V G E L Y S Y G T L L N A I N L Y K N T P E K V M P Q G L V I S F A M R
M L Y M I E Q V H D C E I I H G D I K P D N F I L G N G F L E Q D D E D D L S A G L A L I D L G Q S I D M K L F P K G T I F T A K C E T S G F Q C V E
M L S N K P W N Y Q I D Y F G V A A T V Y C M L F G T Y M K V K N E G G E C K P E G L F R R L P H L D M W N E F F H V M L N I P D C H H L P S L D L L
R Q K L K K V F Q Q H Y T N K I R A L R N R L I V L L L E C K R S R K

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FIGURE 666.

GCGCAGAAGCGGCGGCGGTGGTGGCTTGTGGTGCGGCCTCACCATACAGGAACAGGGCAGACGTTAGCGTGAGTG
ATCACTCTCAATCCCGGGGACCTGGTGGCCTTAGTCTTTCAGGTGGAACGGTGTGCGACATGGGAAAAGAAAACCA
AGCGGACAGCTGACAGTTCTTCTTCAGAGGATGAGGAGGAGTATGTTGTGGAGAAGGTGCTAGACAGGCGCGTGG
TTAAGGGACAAGTGGAATATCTACTGAAGTGGAAGGCCTTTCTGAGGAGCACAATACTTGGGAACCTGAGAAAA
ACTTGGATTGCCCTGAGCTAATTTCTGAATTTATGAAAAAGTATAAGAAGATGAAGGAGGGTGAAAAATAATAAC
CCAGGGAGAAGTCAGAAAGTAACAAGAGGAAATCCAATTTCTCAAACAGTGCCGATGACATCAAATCTAAAAAAA
AGAGAGAGCAGAGCAATGATATCGCTCGGGGCTTTGAGAGAGGACTGGAACCAGAAAAGATCATTGGGGCAACAG
ATTCTGTGGTGATTTAATGTTCCCTAATGAAATGGAAAGACACAGATGAAGCTGACCTGGTTCTTGCAAAAGAAG
CTAATGTGAAATGTCCACAAATTGTGATAGCATTTTATGAAGAGAGACTGACATGGCATGCATATCCTGAGGATG
CGGAAAACAAAGAGAAAGAAACAGCAAAGAGCTTAAAGGAGGGGATGGTCTCTGTCATTTCTCTTTGTACATAATA
CATTCACCTCCCTGCCTCCTCTCCTTTCTACCCACCCCTTTCTATCCTAAACACATCCATAAAAAAATGTGCTTAT
CACTGTGCTCCACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 667

MGKKTkRTADSSSSSEDEEEYVVEKVLDRRVVKQVEYLLKWKGFSEEHNTWEPEKNLDCPELISEFMKKYKKMKE
GENNKPREKSESNNRKSNSFSNSADDIKSKKKREQSNDIARGFERGLEPEKIIIGATDSCGDLMLMKWKDTDEADL
VLAKEANVKCPQIVIAFYEEERLTWHAYPEDAENKEKETAKS

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FIGURE 668

CTGAAGCTTG CATGCCTGCAGGTCGACCCACGCGTCCGCGGACGCGTG GGGCGGACGCGTG GGGTTTTTCCTTTCTT
CCAGAAGGAGATTTAACCATAGTAGAAAGAATGGAGAACTATTA ACTGCCTTCCTTCTGTGGGCTGTGATTTTCA
GAGGGGAATGCTAAGAGGTGATTTTCAATGTTGGGACTCAAAGGTGAAGACACTGAAGGACAGAATTTTGGCAG
AGGAAAAGATCTTCTTCGGTCACCATACTTGAGTTAGCTCTAGGGAAAGTGGAGGTTTCCATTGGAATTCTATAGC
TTCTTCCAGGTCATAGTGTCTGCCCCCACCTTCCAGTATCTCCTGATATGCAGCATGAATGAAAATGGCAAGTT
TCCTGGCCTTCCTTCTGCTCAACTTTTCGTGTCTGCCTCCTTTTGCTTCAGCTGCTCATGCCTCACTCAGCTCAGT
TTTCTGTGCTTGGACCTCTGGGCCCATCCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGTACCTGTTCC
CGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTGAGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAG
ATGGAAAGGAAGTGGAAAGACAGGCAGAGTGCACCGTATCGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTG
CAGGGAAGGCTGCTCTCCGAATACACAACGTACAGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATG
GTGACTTCTATGAAAAAGCCCTGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTGATCTTACGTTGATGTGAAGG
GTTACAAGGATGGAGGGATCCATCTGGAGTGCAGGTCCACTGGCTGGTACCCCCAACCCCAAATACAGTGGAGCA
ACAACAAGGGAGAGAACATCCCGACTGTGGAAGCACCTGTGGTTGCAGACGGAGTGGGCCTGTATGCAGTAGCAG
CATCTGTGATCATGAGAGGCAGCTCTGGGGAGGGTGTATCCTGTACCATCAGAAGTTCCCTCCTCGGCCTGGAAA
AGACAGCCAGCATTTCATCGCAGACCCCTTCTTCAGGAGCGCCAGAGGTGGATCGCCGCCCTGGCAGCGACCC
TGCTGTCTTGCTGCTGCTTCTTGGGGAGCCGTTACTTCTGTGGCAACAGCAGGAGGAAAAAAGACTCAGT
TCAGAAAGAAAAAGAGAGAGCAAGAGTTGAGAGAAATGGCATGGAGCACAAATGAAGCAAGAACAAGCACAAAGAG
TGAAGCTCCTGGAGGAACTCAGATGGAGAAGTATCCAGTATGCATCTCGGGGAGAGAGACATTACAGCCTATAATG
AATGGAAAAAGGCCCTCTTCAAGCCTGCGGATGTGATTCTGGATCCAAAAACAGCAAACCCCATCTCCTTGTTT
CTGAGGACCAGAGGAGTGTGCAGCGTGCCAAGGAGCCCCAGGATCTGCCAGACAACCCTGAGAGATTTAATTGGC
ATTATTGTGTTCTCGGCTGTGAGAGCTTCATATCAGGGAGACATTACTGGGAGGTGGAGGTAGGGGACAGGAAAG
AGTGGCATATAGGGGTGTGCAGTAAGAATGTGCAGAGAAAAAGGCTGGGTCAAATGACACCTGAGAATGGATTCT
GGACTATGGGGCTGACTGATGGGAATAAGTATCGGACTCTAACTGAGCCCAGAACCAACCTGAACTTCCTAAGC
CCCCTAAGAAAGTGGGGGTCTTCTGACTATGAGACTGGAGATATCTCATTCTACAATGCTGTGGATGGATCGC
ATATTCACTTTCTCGGACGCTCCTTCTCTGAGGCTCTATATCCTGTTTTCAGAAATTTTGACCTTGGAGCCCA
CGGCCCTGAGTATTTGTCCAGCGTGAAGAAGAAGAGAGTTTCTCCAATTCTGACCGAGTGCTGATCATTCCCT
AGAGACACCAGTAACCCCGGGCTTAGCTAACGAAAGTGGGGAGCCCTCAGGCTGAAGTAACTTTTCTGCTTCTC
CCTGCCAGCTCAGAGCTGAGGGCCTCCCCCTCCACAGCAACCAATCACAACCATAAAGCTACAAGCACGCACTG
AAGCACTTTACTGATACTCATTCAATTATTTCATATGACAGTTGTTTGAAGTTTGGTACCATCTTATTTTCCCTTA
TACAGATAAGGAACTGGGGTGCAGAAAAGTGAATTGACTACAAAGTAGACATGACTAGTTAACAACACAGCTGG
GATCTAAACAGCAATAACTAATTAATGGAGAACTTAAATGCTCTGAGTGCTGTGTTATGAGCTTTGGTGGAT
GTCACTCCTTTAATCCTCGCAACACCCTGTGGGTAGTCTCATTAGCAAGTATGGAAGTTGAGGCAGGGCAACA
TTAAGCAACTTACATAACTCATGCAGTAATTTCTGCAGTTGGGAGATGTTTCAAGCTTCCAGTCCCCGGCCCTATGGC
CGTTCTTTTCCACCCTGTTTCTTCCCCATAGGAAGAACCCACCTGTAGCCCTGAGGTTCTTTTCCAGGATGGC
TCCAGGATAAGGATCACTGTAGGTGGTTGTGGAGTTGACACCCCTGTTGACTCCTTCCAGCTGATTGTCAGAGC
CTTAGACCCAGCACGCCTTGGATTAGCTTTGCAGAGTGTCTTGGTTGAGAGAATAACCTCACCGTACCCACATGA
CACGTGATTTGGAAGAGACTAGAGGCCACACTTGATAAATCATGGGGAACAGATGTGTTCCACCCAACAAATGT
GATAAGTGATCATGCAGCCAGAGCCAGCCTTCTTCAATCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTT
TCTGTGATATAGGAAATTTGGATGAAGGGAGCTAGAAGAAATACAGGGATTTTTTTTTTTTTTTAAGATGGAGTC
TTACTCTGTTGCTAGGCTGGAGTGCAGTGGTGCATCTCAGCTCCCTGCAACCTCCACCTCCTGGGTTCAAACAA
TTCTCCTGCCTCAGCCTCCCGAGTACTGGGAATATAGGTGCACGCCACCACACCCAACAAATTTTTGTACTTTTA
GTACAGATGAGGGTTCACTATGTTGGCCAGGATGGTCTCGATCTCTTGACCTCATGATCCACCCACCTCGGTCTC
CCAAAGTGCTGGGATTACAGGCTTGAGCCACCGGGTGACCGGCTTACAGGGATATTTTAAATCCCGTTATGGACT
CTGTCTCCAGGAGAGGGGTCTATCCACCCCTGCTCATTGGTGGATGTTAAACCAATATTCCTTTCAACTGCTGCC
TGCTAGGGAAAAAATACTCCTCATTATCATCATTATTATTGCTCTCCACTGTATCCCCTCTACCTGGCATGTGCT
TGTCAGGTTCTAGTTGTTCAATAAATTTGTTAATAATGCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 669

MKMASFLAFLLLNFRVCLLLLQLLMPHSAQFSVLGPGPILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDIFYEKALVELKVAALGSDL
HVDVKGYKDGGIHLECRSTGWYPQPQIQWSNNKGENIPTVEAPVVADGVGLYAVAASVIMRGSSGEGVSTIRSS
LLGLEKTASISIA DPFFRSAQRWIAALARTLPVLLLLLGGAGYFLWQQQEEKKTQFRKKKREQELREMAWSTMKQ
EQSTRVKLLEELRWRSIQYASRGERHSAYNEWKKALFKPADVILDPKTANPILLVSEDQRSVQRAKEPQDLDPNP
ERFNWHYCVLGCEFSISGRHYWEVEVGDRKEWHIGVCSKNVQRKGWVKMTPENGFWTMGLTDGNKYRILTLEPRTN
LKLKPPPKKVGFLDYETGDISFYNAVVGSHIHTFLDVSFSEALYPVFRILTLEPTALSICPA

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FIGURE 670

CAAATCCGTGCTCCTAGATTTGCAGGTTCTGATACTGTGGTTCGAGCTACACTCGCCGCCTGGGCAGACACTCGT
CCAAACCACTGGAGTGTGCTGGTGATCGCAGCCAGCCCTTCGCCTCTCCATGAACCCGTGAGCCTGGGGCAGGTG
CCAGGCGATGGCGCGGCCTGTGAGCGACAGGACCCCGGCCCTCTGCTGCTGGGCGGCCCGGCCGGACACCCCC
TGCGGGGGGAGCGCTGCTTGGGTTGCGGAGCCTTCTGCAGGGGACCAGCAAGCCCAAAGAGCCGGCCAGCTGTCT
CCTGAAGGAAAAGGAGCGCAAGGCGGCCCTGCCTGCAGCCACAACCCCTGGGCCAGGCCTGGAGACTGCGGGCCC
GGCGGATGCCCCGGCTGGGGCAGTGGTGGGCGGAGGGTCCCCGCGGGGGCGCCCGGGGCGGGTGCCCGCCCCGGG
TCTGTTGGCGCCACTGCTGTGGGAGCGCACGCTGCCGTTCCGGCGATGTGGAGTACGTAGACCTGGACGCCTTCCT
GCTGGAGCACGGGCTCCCGCCAGCCCGCCGCCCCCGGTGGCCCGTCGCCGGAGCCGTCGCCCGCGCGGACGCC
CGCACCTTCCCCAGGGCCGGGTTCTGTGCGGCTCGGCTTCCCCCGCTCCTCTCCTGGGCACGCCCCCGCCGGG
TGCCCTCGGGACCGCCACGGGCCACCGCGCAGGCCTGACCTCTCGGGACACACCCAGCCCTGTGGACCCAGACAC
CGTGGAGGTGTTGATGACCTTTGAACCCGACCCAGCTGATCTTGCCCTATCAAGCATTCTGGCCACGAGACCTT
TGACCTCTGAAGACATCGCTTCTCAGAAGAGGAACCTTAAGCCCCAGCCAATCATGAAGAAGGCAAGAAAAATCCA
GGTGCCGGAGGAGCAGAAGGATGAGAAATACTGGAGCCGGCGGTACAAGAACAACGAGGCAGCCAAGCGGTCCCG
TGACGCCCCGGCGGCTCAAGGAGAACCAGATATCGGTGCGGGCGGCCTTCTTGAGAGAAGGAGAAGCCCTGCTGCG
GCAGGAAGTTGTGGCCGTGCGCCAGGAGCTGTCCCACTACCGCGCCGTGCTGTCCCGATACCAGGCCCAGCACGG
GGCCCTGTGAGGCTGCCCCACATCCCCACCTGGCAGGCGTCTCCTCCGCTTGCTGAGACTTACGCCCTGTTCCCT
TCCTGCCCTGTGCCCACGGGCCGGCCAGCTGGGTGCCCCAGGGACGTGATAATGCAGATAAATACATTTATATT
TTAAGAAAAGCGAGCCTCCCCCTCTTGCGGGGGCGGGGAGGGTTCTCTGTGTGTCCCCGGCACGTCAGGGACC
CTATCTCCACCGCCTCCGTTAACACGATCCTGAATAAATCTTGAGAACCC

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FIGURE 671

MARPVSDRTPAPLLLGGPAGTPPGGGALLGLRSLQGTSKPKEPASCLLKEKERKAALPAATTPGPGLETAGPAD
APAGAVVGGGSPRGRPGVPAPGLLAPLLWERTLPFGDVEYVDLDAFLLEHGLPPSPPPPGGSPSEPSPARTPAP
SPGPGSCGSASPRSSPGHAPARAALGTATGHRAGLTSRDTPSPVDPDTVEVLMTFEPDPADLALSSIPGHETFD
RRHRFSEEELKPQFIMKKARKIQVPEEQKDEKYWSRRYKNNEAAKRSRDARRLKENQISVRAAFLEKENALLRQE
VVAVRQELSHYRAVLSRYQAQHGAL

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FIGURE 672

AGACTCAACAAGAGCTCCAGCAAAGACTTTCACTGTAGCTTGACTTGACCTGAGATTAACTAGGGAATCTTGAGA
ATAAAGATGAGCTCTGAAAATTGTTTCGTAGCAGAGAACAGCTCTTTGCATCCGGAGAGTGGACAAGAAAATGAT
GCCACCAGTCCCCATTTCTCAACACGTCATGAAGGGTCCTTCCAAGTTCCTGTCCTGTGTGCTGTAATGAATGTG
GTCTTCATCACCATTTTAATCATAGCTCTCATTGCCTTATCAGTGGGCCAATACAATTGTCCAGGCCAATACACA
TTCTCAATGCCATCAGACAGCCATGTTTCTTCATGCTCTGAGGACTGGGTGGCTACCAGAGGAAATGCTACTTT
ATTTCTACTGTGAAGAGGAGCTGGACTTCAGCCCCAAAATGCTTGTTCTGAACATGGTGCTACTCTTGCTGTCATT
GATTCTGAAAAGGACATGAACTTTCTAAAACGATACGCAGGTAGAGAGGAACACTGGGTGGACTGAAAAAGGAA
CCTGGTCACCCATGGAAGTGGTCAAATGGCAAAGAATTTAACTGTTCAACGTTACAGGGTCTGACAAGTGT
GTTTTCTGAAAAACACAGAGGTGAGCAGCATGGAATGTGAGAAGAATTTATACTGGATATGTAACAAACCTTAC
AAATAATAAGGAAACATGTTCACTTATTGACTATTATAGAATGGAATCAAGGAAATCTGTGTCAGTGGATGCTG
CTCTGTGGTCCGAAGTCTTCCATAGAGACTTTGTGAAAAAAAATTTTATAGTGTCTTGGAATTTTCTTCCAAAC
AGAACTATGGAAAAAAGGAAGAAATTCAGGAAAATCTGCACTGTGGGCTTTTATTGCCATGAGCTAGAAGCAT
CACAGGTTGACCAATAACCATGCCCAAGAATGAGAAGAATGACTATGCAACCTTTGGATGCACTTTATATTATTT
TGAATCCAGAAATAATGAAATAACTAGGCGTGGACTTACTATTTATTGCTGAATGACTACCAACAGTGAGAGCCC
TTCATGCATTTGCACTACTGGAAGGAGTTAGATGTTGGTACTAGATACTGAATGTAAACAAAGGAATTATGGCTG
GTAACATAGGTTTTTTAGTCTAATTGAATCCCTTAACTCAGGGAGCATTATATAAATGGACAAATGCTTATGAAAC
TAAGATTTGTAATATTTCTCTCTTTTTAGAGAAATTTGCCAATTTACTTTGTTATTTTTCCCCAAAAGAATGGG
ATGATCGTGATTTTATTTTTTTTACTTCCTCAGCTGTAGACAGGTCCTTTTCGATGGTACATATTTCTTTGCCTTT
ATAATCTTTTATACAGTGTCTTACAGAGAAAAGACATAAGCAAAGACTATGAGGAATATTTGCAAGACATAGAAT
AGTGTGGAAAATGTGCAATATGTGATGTGGCAAATCTCTATTAGGAAATATTCTGTAATCTTCAGACCTAGAAT
AATACTAGTCTTATAATAGGTTTGTGACTTTCTAAATCAATTCTATTACGTGCAATACTTCAATACTTCATTTA
AAATATTTTATGTGCAATAAAATGATTTGTTTGTATTTTGTGTTTCAGTACAATTATAAGCTGTTTTTATATAT
GTGAAATAAAAGTAGAATAAACACAAAAA

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FIGURE 673

MSSENC FVAENSSLHPESGQENDATSPHFSTRHEGSFQVPVLCVMMNVVFITILIIIALIALSVGQYNCPGQYTFS
MPSDSHVSSCEDWVG YQRKCYFISTVKRSWTSAQNACSEHGATLAVIDSEKDMNFLKRYAGREEHWVGLKKEPG
HPWKWSNGKEFNW FNVGTGSDKCVFLKNTEVSSMECEKNLYWICNKP YK

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FIGURE 674A

CCGGGGTCCCCTTTACCCCAAGTGAGCCAGCTCAGGCTGTCTGCAAAGCCGGAGGTGCGGGCAGCTCCGGGCATT
GCATTGGTGCGGAGGCTTTTATATGCCAGAGAACCCTGAGTGTGCCCTGACATGACAAGGAGCCGTCGTCGTTA
GGACTACCGACCAGACTCCCGGAAATCATGTTGGTAGGATCCCAGTCTTTTTTCGCCTGGAGGGCCCAATGGGATC
ATTAGAAGCCAGTCTTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGCGATCCAGGTGTAACCTCCTTCATTGAAAAT
TCCTCCGCTCTCAAGAAGCCTCAGGCCAACTGAAGAAAATGCACAATTTAGGCCACAAAAACAACATCCCCC
AAAGAGCCTCAGCCTAAAAGGGTGGAAGAAGTCTACAGGGCCTTGAAAAATGGACTTGATGAATATCTGGAGGTT
CACCAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGAAAAGAACTCTCGCCTGGGTGTACTGTAT
GACCTAGACAAGCAAATTAACAATTGAAAAGATACATGAGACGCCTGGAGTTTCATATAAGTAAGGTAGATGAA
CTCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCAGCAAAATGAAGCAAGCCTTCGCAACATCC
CCTGCCAGCAAAGCTGCCCCGGGAGAGTCTGACAGAGATCAATCGGAGCTTCAAGGAGTACACAGAGAATATGTGC
ACCATTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCAAGATGAAAGGTCTGGCTGGCTTTGCACGC
CTCTGTCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGCAGCGGTGAAACTGAAAGGCCAAAATAGAA
GTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTCTGCCCTGATAGTTGGGTTTCATCTCCATCAAG
GTCACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCGTGACCTGTGAGACCAAAGAGCTGTTTGCA
GCCCCACCTCAGGTAGTGGCTGTGACATCAATGACCTTGGTACCATCAAACCTGAACCTGGAAATCACCTGGTAT
CCATTTGACATGGAGGACATGACCGCATCCTCAGGCGCTGGGAACAAGGCAGCAGCCCTTCAGAGGAGAATGTCC
ATGTACAGCCAGGGTACCCCGGAAACGCCCACCTTCAAAGACCACTCCTTCTTTAGGTGGCTGCATCCTTCCCCA
GACAAGCCCAGGCGGCTGTCTGTCTTGAGTGCCTTGCAAGACACTTTCTTTGCCAAGCTGCACCGCAGCCGCTCC
TTCAGTGACCTGCCCTCCCTCAGGCCGAGTCCCAAGGCCGTGCTAGAGCTCTATTCAAATCTACCTGATGACATC
TTTGAAAATGGAAGGCAGCCGAGGAGAAAATGCCACTGTGCTCAGCTTCAGTGACCTGCCCAACGGGGACTGC
GCCCTCACCTCCCCTCAACAGGCTCCCCTTCCAACCTCAACAAATCCAGAAATTACCATCACCCCTGCGGAGTTT
AACCTCAGCAGCTTGGCCTCCAGAATGAGGGTATGGATGACACCAGCTCAGCATCTTCCAGGAACCTCCCTGGGA
GAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGGAGCCAGAAAACCTGCCTCGGCCCCATCT
GAGGCTTGCCGCCGACAGTCTCAGGTGCTGGGGCTGAGCACCTGTTCCTTGAGAATGATGTTGCAGAAGCACTT
CTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACCTGGACACTTCGGAAGGAAACATCACAAAGCAG
CTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACAGGCTGCTCTCTGAGGGTTCTGTTGGTGGAA
GAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATGCTTTTAATGGGCTTTTACTTGCATTAGAA
CCACATAAAGAGCAGTATAAAGAGTTTTCAGGATCTGAACCAAGAAGTCATGAATTTGGATGATATTCTAAAATGC
AAGCCAGCAGTAAGCCGCAGCAGGTCTTCCAGTTTAAGTCTCACAGTTGAAAGTGCTTTAGAAAGCTTTGATTTT
CTGAACACCTCTGATTTTGACGAGGAGGAGGATGGTGATGAGGTTTGTAATGTTGGCGGAGGTGCTGACTCAGTA
TTTTCAGACACTGAGACTGAGAAACACAGTTACAGGTCGGTTACCCAGAAGCCAGGGGGCATCTCAGTGAAGCG
CTCACTGAAGACACAGGAGTTGGGACCAGTGTGGCAGGAAGTCCTCTCCCACTGACCACAGGCAACGAGAGCCTG
GACATCACCATCGTCAAGCACCTCCAGTACTGCACCAACTCGTGAGCAAAATGTTTTCTCAAGCAAAACCCCA
TTTGTGGCAAGAAGTCTCTTAGAGAAGCTTTCTAGGCAGATCCAAGTGATGGAGAACTCGCAGCTGTCAGTGAT
GAGAACATAGGAAATATCAGTTCTGTTGTGGAAGCCATAACCAGAAATTCACAAAAAGCTGTCTTTGCTGTCAATC
TGGACCAAGTGCTGCAGCCCTGTTGGTGTCTACCACAGCCCAGCGACAGAGTGATGAAGCAGCTGGAGGCCAGC
TTTGCCAGAAGTGTCAACAAAGAATATCCAGGACTTGACAGACCCAGTGTTTTCGAACCCCTGGTGTCCCAATTCCTG
GACCAGGCTGAGCCTCTGCTTTCTCCAGCCTGTCTCGGAAGTCGTCACTGTTTTCCAGTATTACAGTTACTTC
ACCAGCCACGGCGTCAGTGACCTGGAGAGTTACCTGAGCCAGCTGGCCAGGCAAGTTTCCATGGTTCAGACTCTG
CAATCACTAAGAGATGAAAACTGCTACAAACCATGAGTGACCTTGCTCCCAGCAACCTCCTGGCCCAGCAGGAA
GTACTCAGGACTCTGGCTCTGCTATTAACCAGAGAGGACAACGAAGTTAGCGAGGCTGTGACGCTTTACTTGGCA
GCAGCCTCCAAAAATCAGCATTTTCAGGGAAAAGGCCTTGCTCTATTACTGTGAAGCACTAACAAAGACAAACCTC
CAGCTCCAGAAAGCAGCTTGCTGGCTCTGAAAATCCTTGAGGCTACTGAAAGCATTAAAAATGCTGGTGACATTG
TGTCAATCTGATACTGAAGAAAATCAGAAATGTGGCCTCAGAAACCCCTCTGTCTCTGGGAGAAGATGGGCGGCTG
GCATATGAACAATTGGACAAAATTTCTCGAGACTGTGTTAAAGTCGGAGGTCGTATGGAAGTGAAGTTGCCACA
GCCTTTTAAATTACAGATTAACCTGCCTAACAGCTGTCTTAATATCTGGCCCTTTTCATCAGGATGGTGCTGTGGTT
TGGGCTGGAAATGTTTAGAGCCTGAGAGACACGACAAGTGAATAAAAAATGTAGGCCAGGTGCAGTGGCTCATG
CCTGTAATCCAGTACTTTGGGAGGCCAACGCAGGAGAATTGCTTAAGCCCAGGAGGTTCAAGACCAACCTGGGC

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FIGURE 674B

AACATAGCAAGGCCCTGTCTCTACAAAAAAATAGTTTAAATTAGTCGGGCGTGGTGGCATGCACCTGTAGTCCCA
GCTACTTGGGAGGCTAAGGTGGGAGGATTGCTTGAGCCCAGAAGATTCAGGCTGCAGTGAGCCATAATTGCCCA
CTGCACTCCAGACTGGGTGACAGAGCAAAACCCTGTCTCAAAAAACAAAACAACAACAACCTAAAAAACATG
TTATAGAAAGAATTTCAGAGTCTCGTTTCACAGTACCTATCTACTTTTCCTTTGGCCAATATAGAATAGGGCTATG
GTATAATTCAAATAGATTACATCGTCGATTGTGTCTAATAATACTCAGTGAAAGAGTCCATCTTATCTTAATATG
TATGAAATTTAAAAATAGCCATCTTTGTACTTTTTTGCAAGTTTCTCTATAAGCTTGAAATAGTCATGTGATACT
TCGACAAACATCATATGCCTTGCAAGTTTTCTCGGTGCTGTTCTCAGGGTTGAGTAGTCCCCTTAGCTACCTAAC
TTTACTTTCAATACAAAGCACAAAAAGAATACTTCAAATAAAAGTTTGCCTGCAGAACCTGGCAAAATGACCCA
TTATGAGAGTTTAGATGTTTTAATTTTATGTGCTCCAGCTACTCTGGAGTCTGAGGTGGGAGGATCACTTGAGG
CAGAGTTGTCAGTAAGCTGAGATTACACTACTGCACTCCAGCCCATGTGACAGAGGAATGAGAGCCAGTCTCAAA
AAAAAAAACAAAAACTCCCATAATTTATTTTGTTCCTTTTCCCCATCCTGAAAATTCCCAAATCATGTTTCCA
TTATGGAAAAATGATAAGTAAATGACTAAGAACTACATTAAGATTATGCCTATACACTTAAACAAAAAACTCAAA
GCTTATGCTTTTTTTTTTTAATTAATGAGAGCTATTTTTTATGATATTCTTACCATAGGGGTGTTTTGCTGCTAA
GACAAATCAAAACCAAAGCTGTAGATTCACAAACCTGTGATGCTCTTTGAGGTGGAGGAACCTAGAAGTCAGAG
AAATCCTAATGGAGTAGGAGTGGAGGAACATTTAAAGTGGTCCCTCCTTCTGTAAAAATGACCGTGGGATTAGAA
AGAAGGACATCCTGAGGGGTGGTTACTGCCCCCAGGGAATCACTCACTGGTAGGATTCCCTGGCCAAATAGTTC
AAACATCAGGTCCCATTATTGCTTCAGTATCAGAGATGCAAGTTCATTAAGCAAAGTACAAGACCATTCACTAGC
TCTTATTTAAATATCTTTTCTTCTCTAAAGAGTGTACAAGGTGGGGTATGCCAAGGTATCAAAACAATATATGT
GAGTGTAATTTAACTGTGGAATATCAACTGTACTATGGACGTGTTTGTATCATTTTAGATGTCATTTTAAATATT
TACATTTTAGCAAGACTTTTTAAAAAGGACTCATTTTCAATTTCAAAGTGCAAATTGTTTGCCAGGCTTCTGGCAAAT
GGTTCTTTCAACTGTGAACCTATAGTGATACATATCTGTATATTTATAAATATTATATATATTACATACCTTCA
GTTTAAAGGTACATTGTACAGTCTGTAGTTAGGAGGTATAGCCTATAGCTTATGTTAAATGGTTGAAATGGTTCT
TTTTATAGAAAGTCAAACACAGATGTTACAGGATTTTGTGTTTGGTTTGTCATTTTTTTTATTTTTTATTTTGACT
ATTGCATGAGTAATTAATTCCAGATCTTTTGTATTACATTCTGTATTTTATGTTTGGTTGAGGGGTGCTTTTAGT
TGTGTGGCATTGTATTGATCTTTCAGTCATGTAAGTTAAATAAAAATTATTTTTGAATTACTAGC

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FIGURE 675

MLVGSQSFSPGGPNGIIRSQSFAGFSGLOERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNNPPKEPQPKRVE
EVYRALKNGLD EYLEVHQTELDKLT AQLKDMKRNSRLGVLYDLDKQIKTIERYMRRLEFHISKVDELYEAYCQR
RLQDGASKMKQAFATSPASKAARES L TEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDMEDMTASSGAGNKAALQRRMSMYSQGTPETPTFKDHSFFRWLHPSPDKPRRLSVL
SALQDTFFAKLHRSRFSFSDLP SLRPSPKAVLELYSNLPDDIFENGKAAEEKMPLSLSFSDLPNGDCALTSHSTGS
PSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHLKEEDPEEPRKPASAPSEACRRQSSG
AGAEHLFLENDVAEALLQESEEASELKPVELDTSEGNITKQLVKRLTSAEVPMATDRLLSEGSVGGEGEGCRSFL
DGSLEDAFNGLLLALEPHKEQYKEFQDLNQEV MNLDDILKCKPAVSRSRSSSLTIVESALESFDFLNTSDFDEE
EDGDEV CNVGGGADSVFSDTETEKHSYRSVHPEARGHLSEALTEDTGVGTSVAGSPLPLTTGNESLDITIVRHLQ
YCTQLVQQIVFSSKTPFVARSLLEKLSRQIQVMEKLA AVSDENIGNISSVVEAIP EFHKKLSLLSFWTKCCSPVG
VYHSPADRV MKQLEASFARTVNKEYPGLADPVFRTLVSQILDQAEPLLSSSLSEVVTVFQYYSYFTSHGVSDLE
SYLSQLARQVSMVQTLQSLRDEKLLQTMSDLAPSNLLAQQEV LRTLALLLTREDNEVSEAVTLYLAAASKNQHFR
EKALLYCEALTKTNLQLOKAA CLALKILEATESIKMLVTL CQSDTEEIRNVASETLLSLGEDGRLAYEQLDKFP
RDCVKVGGRGHGEVATAF

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FIGURE 676

[illegible]

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FIGURE 677

MEQRRVTDFFARRRPGPPRIAPPKLACRTPSPARPALRAPASATSGSRKRARPPAAPGRDQARPPARRRLRLSVD
EVSSPSTPEAPDIPACPSPGQKIKKSTPAAGQPPHLTSAQDQDTISELASCLQRARELGARVRALKASAQDAGES
CTPEAEGRPEEPCGEKAPAYQRFHALAQPLGLVLPYKYQVLAEMFRSMDTIVGMLHNRSETPTFAKVQRGVQD
MMRRRFEERNVGQIKTVYPASYRFRQERSVPTFKDGARRSDYQLTIEPLLEQEADGAAPQLTASRLLQRRQIFSQ
KLVEHVKEHHKAFLASLSPAMVVPEDQLTRWHPRFNVDEVPDIEPAALPQPPATEKLTTAQEVLARARNLISPRM
EKALSQALALRSAAPSSPGSPRPALPATPPATPPAASPSALKGVSQDLLERIRAKEAQKQLAQMTRCPEQEQLQR
LERLPELARVLRVSVFVSERKPALSMEVACARMVGSCCTIMSPGEMEKHLLLLSELLPDWLSLHRIRTDITYVKLDK
AADLAHITARLAHQTRAEEGL

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FIGURE 678

GCTCAGATACGCGACGCGTAGCAGGCGGGGACCGAACGGGTGCCTCAGTGTCTTCCCCTCCCCTCGCCTGGCCT
CGCCGTCCTCTCCCCGCAGCCGGACCGGAACATATGTGATCCCGGAAGTTCCGGGGCCTTTGCTGTGTGGGATAAA
CAGTAATGGCGGAGGCTGCAACTCCCGGAACAACAGCCACAACATCAGGAGCAGGAGCGGCAGCGGCGACGGCGG
CAGCAGCCTCCCCCACCCTGATCCCCACAGTCACCGCCCCGTCCCTGGGGGCGGGCGGAGGGGGCGGCGGCAGCG
ACGGCAGCGGGCGGCGGCTGGACTAAACAGGTACCTGCAGGTATTTTATGCATGGGGTTTGTAAAGGAAGGAGACA
ACTGTCGCTACTCGCATGACCTCTCTGACAGTCCGTATAGTGTAGTGTGCAAGTATTTTCAGCGAGGGTACTGTA
TTTATGGAGACCGCTGCAGATATGAACATAGCAAACCATTGAAACAGGAAGAAGCAACTGCTACAGAGCTAACTA
CAAAGTCATCCCTTGCTGCTTCCTCAAGTCTCTCATCGATAGTTGGACCACTTGTTGAAATGAATACAGGCGAAC
GTGAGTCAAGAAATTCAAACTTTGCAACTGTAGGAGCAGGTTTCAAGGACTGGGTGAATGCTATTGAGTTTGTTT
CTGGGCAACCCTACTGTGGCCGTACTGCGCCTTCCTGCACTGAAGCACCCCTGCAGGGCTCAGTGACCAAGGAAG
AATCAGAGAAAGAGCAAACCGCCGTGGAGACAAAGAAGCAGCTGTGCCCTATGCTGCAGTGGGAGAGTGCCGAT
ACGGGGAGAACTGTGTGTATCTCCACGGAGATTCTTGACATGTGTGGGCTGCAGGTCTTCATCCAATGGATG
CTGCCCAGAGATCGCAGCATATCAAATCGTGCATTGAGGCCCATGAGAAAGGACATGGAGCTCTCATTGCGCTCA
GCAGCAAGGACATGGTGTGTGGGATCTGCATGGAGGTGGTCTATGAGAAAGCCAACCCAGTGAGCGCCGCTTCG
GGATCCTCTCCAACCTGCAACCACACCTACTGTCTCAAGTGCATTTCGCAAGTGGAGGAGTGCTAAGCAATTTGAGA
GCAAGATCATAAAAGTGAGACTCCTCCCCAGTCTTCATTTGTGCTTTCTCTTTTGGGGAAGAATTTAGTAACCTGT
GCCAACTTTCAACCAGATGGACCGCATTTAAATGCATGCATTTTATCTTGAAACTGGGATATTCTAATGGGGATT
TCTTTCTTTGTATTTTACGCTAGCTTCTAGGTTAGTTGGTCTATCTACTTTTATTTGAATGAGGAAACCCTGTGTAT
CAGTTAGAATCTTCGTGCTTTTTCTGAGGAGATTGTGTTAATGGATTATTAGCCAGTTTAGGCTCAGTGAACAA
ACTGATCTAGCTCTGAATGTATGTTTCCTGACGTTTTACATTTCCACTTCCTATTCCATTCAATTAAGCTAGCCA
ACAATCCACCATCCTTTAAAGATTGTTCTCATAACTGAACAAAAACCACATAATCTAAACAGAGCAAAGCTACAA
GAAATAAATTTATTTAAACGAAAAAAAAAAAAAAAAA

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FIGURE 679

MAEAATPGTTATTSGAGAAAATAAAASPTPIPTVTAPSLGAGGGGGGSDGSGGGWTKQVTCRYFMHGVCKEGDNC
RYSHDLSDSPYSVCKYFQRGYCIYGDRCRYEHSKPLKQEEATATELTTKSSLAASSSLSSIVGPLVEMNTGERE
SRNSNFATVGAGSEDWVNAIEFVPGQPYCGRTAPSCTEAPLQGSVTKEESEKEQTAVETKKQLCPYAAVGECRYG
ENCVYLHGDSCDMCGLQVLHPMDAAQRSQHISKSCIEAHEKDMELSAVSSKDMVCGICMEVVYEKANPSERRFGI
LSNCNHTYCLKCIRKWRSKQFESKIIK

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FIGURE 680

GGCTCGAGTGCCTGGCGGGCTCTGGCTTCCGCGTCCGCCCCTGCTCCGGCTTCGCCCCGAGCTCCGCGCCCCGCGG
GCAACCAAGCCCCCAGCGAAGCCCGCACAGCTCCGGGTGCCAGGACGGGGGGCCATGCCGTGCCGGAGGGAGGAG
GAAGAGGAAGCCGGCGAGGAGGCGGAGGGGGAGGAAGAGGAGGACGACAGCTTCCTCCTGCTGCAGCAGTCGGTG
ACGCTGGGCAGCTCGGGCGAGGTGGACCGGTGGTGGCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAG
GACAGCCCCGGCTCGCCGTGCGCGCCCCCGGGGGTGCCGCTGCGGGCCCCGGGGCCCCCTGGCTGCGGCGGTGCCG
GCGGACAAGGCCCGGCCCCCGGCGGTGCCGCTGCTGCTGCGGCCCGCTTCGGCTGAGACGGTGGGCCCGGCGCCC
TCTGGGGCCCTGCGCTGCGCCCTAGGGGACCGCGGCCCGCTGCGCGGACGCGCTGCGCCCTACTGCGTGGCGGAG
GTCGCCCGCAGGCCCCAGCGCGCTGCCGGGGCCGTGCCGGCGAGGATGGCTCAGGGACGCGGTACCTCCCCGCCG
TTGCAGCAGCGCCGATGGACCCAAGCCGGGGCACGCGCCGGCGACGACGACCCGCATCGGGCTCCTCCAGCAGCTC
GTGCTCTCGGGAAACCTCATCAAGGAAGCCGTGCGGAGACTCCAACGAGCCGTGCGCGCGGTTGCAGCCACGGGC
CCCGCAAGCGCCCCCTGGGCCCGGGGGAGGCCGCGAGCGGACCTGACCGCATTGCCCTGCAGCCCTCAGGCTCCTTG
CTCTTGACGCAGGCCCTCCTGGAGGAGGAAGTGGAGGCCGCTGCGTAGACCCAACAGCGTCCAGTTCCTACTAACTC
TGAGCTGAAGCCGACGTCGCCAGCCTGGGAGCGACCACTTTGGCTGCGGGGAGGCGCGTGGGGAGAGATCTCAAC
CAGAGAAGTTACCAGCCGCGGCGAGGCCGTGCGAGAAAACCTTAAGCGTGGAGAAATGTATGCGCCAGGGTGCTTC
CGTGGGGCATGAGAATTTCCCGGGCCATCCAAGCCCAAGGACCTGGGATAAACTGGGAGAACTATGGCAGCTACT
TGCATCGACTTGTACCTCACTTAGCCCTTGCGGGCGCTCGTGAGCTTGGATTGTTTAAGGAGGGCTCAGGGGTAGG
AATCGCGATGGCTTTATAACAATACTTGAAAACTAACGACACGCATACATTTTCTTATTTCTGGTGGAGGAGCT
TAGTAAGTGCTGCTACAATTGCTGTGCAAAGAAATTCAGAGGGGAGAGAATGTAAAAGTTTGGTGGTGGGTGG
CTTGGCATTGCCCTTTTTCCACCGATTTCGGTGGCTGGTGAAGGTGGGAGATGTGAATCCAATTAAGGGACTG
GAGAGAGGTGAAGAATTTTGCAGGTGGGAGATTTGGATTTGAATGTGGACTTGTAATGACTTGACCTTGCCATC
TGTGTTCAAGGTCACGGTTTGCTGTGGGGTTCTGGGAGAGCTTACTCACCCCGGAGTCTTTTCTTTCTTTGCT
CCAAGAAGAGCCCTGTTGGTGCTTTACCACCGCTTGGAGTCTCCCGAGGACACAAACAGGCAGAGAGGGACGTGT
AGGGAGAGTTCTTTCCTGTTTTCTGTGCTTTCTTTTTACAGGACTCCCGGAAGGCCACTCATGGCCATGCCAGG
AGCTTTCTCAGAAACAGTCATAAACGATCTCTTGAGTCTCTTTCTTGTCTCTCCAGCTGAGCTTTCTTATTCCAC
CCTTTCTGGTGTCTATAGGAATGCATGAGAGACCCTGGACGTTTTTCTGCTCTCTTCTGGCCCTCCATGGAGCCA
TGGGCCTCGGCCTCGGCGGCTCCTCACCCCTACAATTTATTTCTCTCTCCCGTGCCAGCCCTTCTTTTGTGTCTG
AAACCGGTTTTAAATGTGACTCTCCAGAGAAGAAGCCGCTGGCTGTATGAACTTGACGGCGCTTTTGTAAGG
TGCCACCCCCAACTTTAAGGTAGCTAAACCAATTTTTAAAAGATTCAATGGCTTGTTTCATCCTCCAGATGTAGC
TATTGATGTACACTTCGCAACGGAGTGTCTGAAATTGTGGTGGTCCCTGATTATAGGATTTTCA

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FIGURE 681

MPCRREEEEEAGEEAEIEEEEDDSFLLLQQSVTLGSSGEVDRLVAQIGETLQLDAAQDSPASPCAPPGVPLRAPG
PLAAAVPADKARPPAVPLLLPPASAETVGPAPSGALRCALGDRGRVRGRAAPYCVAEVAAGPSALPGPCRRGWLR
DAVTSRRLQRRWTQAGARAGDDDPHRLQLVLSGNLIKEAVRRLQRAVAAVAATGPASAPGPGGGRSGPDRIA
LQPSGSL

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FIGURE 682

ATGGCTGTGTGAACGACTGCCATGGGCCACCGGAAGCTTGAGAGCGTGGGGAGCGGCATGTTGGACCATAGGGTG
AGACCAGGTCTGTCCCTCACAGCCAGGAGCCGAGAGCGAGGACATGGAGCTGCCCTTGGAGGGGCTATGTGCC
GAGGGCCTGGAGCTGGCTGCCCTGCGGCCAGAGAGCCCCGCGCCAGAGGAACAGGAGTGCCACAACCACAGCCCC
GATGGGGACTCCAGCTCTGACTACGTGAACAACACCTCTGAGGAGGAGGACTATGACGAGGGCCTCCCTGAGGAG
GAGGAGGGCATCACCTACTACATCCGCTACTGCCCTGAGGACGACAGCTACCTAGAGGGCATGGACTGCAACGGG
GAGGAGTACCTGGCCACAGTGCACACCCTGTGGACACTGATGAATGCCATGAGGCGGTGGAGGAGTGGACGGAC
TCGGCGGGCCCCGACCCCCACGGCCACGAGGCTGAAGGCAGCCAGGACTACCCAGACGGCCAAC TGCCATTCCG
GAGGATGAGCCCTCCGTCCTTGAGGCCCATGACCAGGAAGAAGATGGTCACTACTGTGCCAGCAAAGAGGGGCTAC
CAGGACTACTACCCAGAGGAGGCCAACGGGAACACCGGCGCCTCCCCCTACCGCCTGAGGCGTGGGGATGGGGAC
CTGGAGGACCAGGAGGAGGACATTGACCAGATCGTGGCAGAGATCAAGATGAGTCTGAGCATGACCAGCATCACC
AGCGCCAGTGAGGCCAGCCCCGAGCATGGGCCTGAGCCAGGGCCTGAGGACTCTGTAGAGGCTGCCACCCATC
AAGGCCAGCTGCAGCCCCAGCAGGCACGAGGCGAGGCCCAAGTCGTGAACCTCCTTCCCGAGGCCAAGCACCCC
GGAGACCCCCAGAGAGGCTTCAAGCCCAAGACCAGGACCCAGAAGAGAGGCTGAAGTGGCCCCACGAGCAGGTT
TGCAATGGTCTGGAGCAGCCAAGGAAGCAGCAGCGCTCTGATCTCAATGGACCTGTTGACAATAACAACATTCCA
AAAACAAAAAGGTGGCATCATTCCAAGTTTGGTGGCTGTTCCAGGGCCTGCGAACCAAAAAACCTCATCGAC
GGGATCATCTTTGCTGCCAATTACCTGGGGTCCACCCAGCTGCTATCAGAACGGAACCTTCCAAAAAACATCAGA
ATGATGCAAGCGCAGGAGGCCGTCAGCCGGGTCAAGAGGATGCAAAGGCTGCTAAGATCAAGAAAAAAGCGAAT
TCTGAGGGGGATGCCAGACGCTGACGGAAGTGGACCTCTTCAATTTCCACCCAGAGGATCAAGGTTTTAAATGCA
GACACGCAGGAAACCATGATGGACCACGCCTTGCCTACCATCTCCTACATCGCCGACATTGGGAACATTGTAGTG
CTGATGGCCAGACGCCGATGCCCGGTCAGCCTCTCAGGACTGCATCGAGACCACGCCCCGGGGCCAGGAAGGC
AAGAAGCAGTATAAGATGATCTGCCATGTGTTTCGAGTCGGAGGATGCCAGCTCATCGCCAGTCTATCGGCCAG
GCCTTCAGCGTGGCCTACCAGGAGTTCCTGCGAGCCAATGGCATCAACCCGAAGACTTGAGCCAGAAGGAATAC
AGCGACATCATCAACACCCAGGAGATGTACAACGACGACCTCATCCACTTCTCAAACCTCGGAGAACTGCAAGGAG
CTGCAGCTGGAGAAGCACAAGGGCGAGATCCTGGGCGTGGTGGTGGTGGAGTCGGGCTGGGGCTCCATCCTGCC
ACGGTGATCCTGGCCAACATGATGAATGGCGGCCCGGCTGCCCGCTCGGGGAAGCTGAGCATCGGGGACCAGATC
ATGTCCATCAATGGCACCAGCCTGGTGGGGCTGCCCTCGCCACCTGCCAAGGCATCATCAAGGGCCTGAAGAAC
CAGACACAGGTGAAGCTCAACATTGTCAGCTGTCCCCGGTACCACGGTCCTTATCAAGCGCCAGACCTCAAG
TACCAGCTGGGCTTCAGCGTGCAAGTGAATTATCTGCAGCCTCATGAGAGGGGGCATTGCTGAGCGAGGGGGC
GTCCGTGTGGGCCACCGCATCATCGAGATCAACGGGCAGAGCGTGGTGGCCACAGCCCACGAGAAGATAGTCCAA
GCTCTGTCCAACCTCGGTGCGAGAGATCCACATGAAGACCATGCCCGCCGCTGTTGAGGCTCCTCAGGGGTGAG
GAGACCCCGCTGTACATCTAGGCCACCCAGCCTGGCCACGCAGCCAGGACACCGGGCAGGGCCGCCCCGGGCCA
GAGGAGCTGGGAGCCGGGCGCAGACTTGACCCCGACGCCACAGCCAGCCACGGACGCTGGCTCCCCAAAGGGT
GTGCCCTCACCACCACTTGATTTTTTTTCATTTTGCCAAAAGGGGTATGTCTTTATCAAAGGAGAGTCACAGAA
CAAATGTTTGTGTTGTAAAGCGTTCCAAGTATTTGCCACGTTCTGGACTGTCTTCTCCCTGCACAAGCCAGGGTG
TGTCTCGGTAGCTGTGCGTGGTGTGGAGTGTGTCTTTCTCCCTGAAGCTGTGCGGAGCGAACTGGCGCCTCC
GAGGGACGCGGCTCCCGGGCAGGGCAGCCGTCACCCCTGCCTCCCGCCCCCTTGGCTGGGACGTCTGGGGTCTT
GTGGGGCCCCCACAATGGTCCCAAACAGCTGCCTCTGCCACTGACTGCAGGGACACGGGCAGCCTGGCTCCCAGG
ACACGACTTGTAATGAAAGTTTGGGGACATGTGATTGATTGATTGATTGATTGTAATAAAGGATGATGGCCACA
ACATGAAAACCTCCATATTTATTTAGATGCTATTATTACTGTTTGGACTTTTATTTTGGCAGGCTTTTTTCCAGAC
TCTAGGGTTTTCCAATGTGACTAATGACCACACCTGCCTCTCCCGTCGTCTCTTCTGGGCACCTCCCACCCGGC
TGCATACCCGGCCAGGGCTCCACAGAGACAAGGAXGGCACAGGTGTCTGCCCCCTCTTTAAATCGATCTACAC
ACATCCACGCACATGCGACCCCGAGGGAAACGAAACCCACTCTAGAAAACGCGACCTTGGCCGCACCTAAAGCAG
CCAGCCGTGAGTGCAGACCCCTTGGCCAGCGTGGCGCAGTGGCCCTGAGCAGTAGTGGCATGTGTGTAGATCAAG
TCGGATCTAGTCCAGCTCGGTTTATTAGCGATCCATGTAATCTGACGTCATCTTGTCTCGAAGTCTCTTTTTTTG
GCCCAGGCCTTGAAGAATACACTGTGACTTAAGAAGCCTTACCACGCAGTAACATAAGCTTTAGGATGACTGTAT
TCGAGGAGTGCCGTGTGTTGCATGCAGCTACCCGTAGGAAGACTTCGCGCATATCACTAATAAACCTGAAGTCGT
GATGACC

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FIGURE 683

MAHRKLESVGSGLDHRVRPGVPVPHSQEPESSEDMELPLEGYVPEGLELAALRPESPAPEEQECHNHSPDGDSSSD
YVNNTSEEDYDEGLPEEEEGITYYIRYCPEDDSYLEGMDCNGEYLAHSAHPVDTDECHEAVEEWTD SAGPHPH
GHEAEGSQDYPDGQLPIPEDEPSVLEAHDQEEDGHYCASKEGYQDYYPEEANGNTGASPYRLRRGDGDLEDQEED
IDQIVAEIKMSLSMTSITSASEASPEHGPEPGPEDSVEACPPIKASCSPSRHEARPKSLNLLPEAKHPGDPQRGF
KPKTRTPEERLKWPHQVCNGLEQPRKQQRSDLNGPVDNNNIPKTKKVASFPSLVAVPGPCPKNLIDGIIFAAN
YLGSTQLLSERNPSKNIRMMQAQEA VSRVKRMQKAAKIKKKANSEGDAQTLTEVDLFI STQRIKVLNADTQETMM
DHALRTISYIADIGNIVVLMARRRMPRSASQDCIETTPGAQEGKKQYKMICHVFESEDAQLIAQSIGQAFSVAYQ
EFLRANGINPEDLSQKEYSDIINTQEMYNDLIHFSNSENCKELQLEKHKGEILGVVVVESGWGSILPTVILANM
MNGGPAARSGKLSIGDQIMSINGTSLVGLPLATCQGI IKGLKNQTQVKLNIVSCPPVTTVLIKRPDLKYQLGFSV
QNGIICSLMRGGIAERGGVRVGHRIIEINGQSVVATAHEKIVQALSNSVGEIHMKTMPAAMFRLLTGQETPLYI

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FIGURE 684

TTTTTGCAACCAACATGGTTCTATTAAAACTCTCTTTGACTATGGCATTCAAGGACAGCAATACAATCTTTTTT
TTTTTTAACAAGCAACTAATATAAAAAATCTGCAAATGCCATATATTCATATCTAGGCTATTCTTCTCATATAGG
CATGTCATTAGATAGACTTTCTTTCTATTCTTTCTGAGGTATTTTTTGTGGTTTACTTTTATTGTACTGCTGG
ATGCATTATTTTTGATCATCCTTTCCTAAAAATGATTTAAAGACCTGCAAATAATTTTATTGCATAGGACACTATT
GATGACACATAGAATGGGAGCTGCAAGTATGTGGCATTGGAACAAGCCTTACAAATATTGCATTTTAAGAATACA
CACATTTTTTACAGTTTGTCTCTTTTAAAAAATTTGAAGTTATAGC

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FIGURE 685A

CCTACTCTATTTCAGATATTCTCCAGATTCCCTAAAGATTAGAGATCATTCTCATTCTCCTAGGAGTACTCACTTC
AGGAAGCAACCAGATAAAAGAGAGGTGCAACGGAAGCCAGAACATTCCCTCCTGGAAATTCAACCTGTTTCGCAGT
TTCTCGAGGAATCAGCATTCAGTCAATCCGGGCCGGGAGCAGTCATCTGTGGTGAGGCTGATTGGCTGGGCAGGA
ACAGCGCCGGGGCGTGGGCTGAGCACAGCGCTTCGCTCTCTTTGCCACAGGAAGCCTGAGCTCATTGAGTAGCG
GCTCTTCCAAGCTCAAAGAAGCAGAGGCCGCTGTTTCGTTTCCTTTAGGTCTTTCCACTAAAGTCGGAGTATCTTC
TTCCAAGATTTTACGTCTTGGTGGCCGTTCCAAGGAGCGCGAGGTCTGGGATGATCTGAAGGGGACCGCAATGG
AGGAGCAAAGAAGAAGAACTTTTTTAAACTGAACAATAAAAGTGAAAAAGATAAGAAGGAAAAGAAACCAACTGT
CAGTGTATTTTCAATGTTTCGCTATTCAAATTGGCTTGACAAGTTGTATATGGTGGTGGGAACCTTTGGCTGCCAT
CATCCATGGGGCTGGACTTCCTCTCATGATGCTGGTGTGTTGGAGAAATGACAGATATCTTTGCAAATGCAGGAAA
TTTGAAGATCTGATGTCAAACATCACTAATAGAAGTGATATCAATGATACAGGGTTCTTCATGAATCTGGAGGA
AGACATGACCAGGTATGCCTATTATTACAGTGGAAATTGGTGTCTGGGGTGTCTGGTTGCTGCTTACATTCAAGTTTC
ATTTTGGTGCCTGGCAGCTGGAAGACAAATACACAAAATTAGAAAACAGTTTTTTCATGCTATAATGCGACAGGA
GATAGGCTGGTTTGATGTGCACGATGTTGGGGAGCTTAACACCCGACTTACAGATGATGTCTCCAAGATTAATGA
AGGAATTGGTGACAAAATTGGAATGTTCTTTTCAGTCAATGGCAACATTTTCACTGGGTTTATAGTAGGATTTAC
ACGTGGTTGGAAGCTAACCCCTTGATTTTTGGCCATCAGTCCTGTTCTTGACTGTGAGCTGTCTGTCTGGGCAAA
GATACTATCTTCATTTACTGATAAAGAACTCTTAGCGTATGCAAAAGCTGGAGCAGTAGCTGAAGAGGTCTTGGC
AGCAATTAGAAGCTGTGATTGCATTTGGAGGACAAAAGAAAGAACTTGAAAGGTACAACAAAATTTAGAAGAAGC
TAAAAGAATTGGGATAAAGAAAGCTATTACAGCCAATATTTCTATAGGTGCTGCTTTCCTGCTGATCTATGCATC
TTATGCTCTGGCCTTCTGGTATGGGACCACCTTGGTCTCTCAGGGGAATATTCTATTGGACAAGTACTCACTGT
ATTTTCTGTATTAATTTGGGGCTTTTAGTGTTGGACAGGCATCTCCAAGCATTGAAGCATTGCAAATGCAAGAGG
AGCAGCTTATGAAATCTTCAAGATAATTGATAATAAGCCAAGTATTGACAGCTATTGCAAGAGTGGGCACAAACC
AGATAATATTAAGGGAATTTGGAATTCAGAAATGTTCACTTCAGTTACCCATCTCGAAAAGAAGTTAAGATCTT
GAAGGGTCTGAACCTGAAGGTGCAGAGTGGGCAGACGGTGGCCCTGGTTGGAAACAGTGGCTGTGGGAAGAGCAC
AACAGTCCAGCTGATGCAGAGGCTCTATGACCCACAGAGGGGATGGTCAGTGTGATGGACAGGATATTAGGAC
CATAAATGTAAGGTTTCTACGGGAAATCATTGGTGTGGTGAGTCAGGAACCTGTATTGTTTGCCACCACGATAGC
TGAAAACATTCGCTATGGCCGTGAAAATGTCACCATGGATGAGATTGAGAAAGCTGTCAAGGAAGCCAATGCCTA
TGACTTTATCATGAAACTGCCTCATAAATTTGACACCCTGGTTGGAGAGAGAGGGGGCCAGTTGAGTGGTGGGCA
GAAGCAGAGGATCGCCATTGCACGTGCCCTGGTTCGCAACCCCAAGATCCTCCTGCTGGATGAGGCCACGTCAGC
CTTGGACACAGAAAGCGAAGCAGTGGTTCAGGTGGCTCTGGATAAGGCCAGAAAAGGTCGGACCACCATTTGTGAT
AGCTCATCGTTTGTCTACAGTTCGTAATGCTGACGTCATCGCTGGTTTCGATGATGGAGTCATTGTGGAGAAAGG
AAATCATGATGAACTCATGAAAGAGAAAAGGCATTTACTTCAAACCTGTGCACAATGCAGACAGCAGGAAATGAAGT
TGAATTAGAAAATGCAGCTGATGAATCCAAAAGTGAAATTGATGCCTTGGAAATGTCTTCAAATGATTCAAGATC
CAGTCTAATAAGAAAAAGATCAACTCGTAGGAGTGTCCGTGGATCACAAAGCCCAAGACAGAAAGCTTAGTACCAA
AGAGGCTCTGGATGAAAGTATACCTCCAGTTTCCTTTTGGAGGATTATGAAGCTAAATTTAACTGAATGGCCTTA
TTTTGTTGTTGGTGTATTTTGTGCCATTATAAATGGAGGCCTGCAACCAGCATTGCAATAATATTTCAAAGAT
TATAGGGGTTTTTACAAGAATTGATGATCCTGAAACAAAACGACAGAATAGTAACTTGTTTTCACTATTGTTTCT
AGCCCTTGGAATTATTTCTTTTATTACATTTTTCCTTCAGGGTTTCACATTTGGCAAAGCTGGAGAGATCCTCAC
CAAGCGGCTCCGATACATGGTTTTTCCGATCCATGCTCAGACAGGATGTGAGTTGGTTTGATGACCCTAAAAACAC
CACTGGAGCATTGACTACCAGGCTCGCCAATGATGCTGCTCAAGTTAAAGGGGCTATAGGTTCCAGGCTTGCTGT
AATTACCCAGAATATAGCAAATCTTGGGACAGGAATAATTATATCCTTCATCTATGGTTGGCAACTAACACTGTT
ACTCTTAGCAATTGTACCCATCATTGCAATAGCAGGAGTTGTTGAAATGAAAATGTTGTCTGGACAAGCACTGAA
AGATAAGAAAGAACTAGAAGGTGCTGGGAAGATCGCTACTGAAGCAATAGAAAACCTCCGAACCGTTGTTTCTTT
GACTCAGGAGCAGAAGTTTGAACATATGTATGCTCAGAGTTTGCAGGTACCATACAGAACTCTTTGAGGAAAGC
ACACATCTTTGGAATTACATTTTCTTTCACCCAGGCAATGATGATTTTTTCTATGCTGGATGTTTCCGGTTTGG
AGCCTACTTGGTGGCACATAAACTCATGAGCTTTGAGGATGTTCTGTTAGTATTTTCAGCTGTTGTCTTTGGTGC
CATGGCCGTGGGGCAAGTCAGTTTCAATTTGCTCCTGACTATGCCAAAGCCAAAATATCAGCAGCCACATCATCAT
GATCATTGAAAAACCCCTTTGATTGACAGCTACAGCACGGAAGGCCTAATGCCGAACACATTGGAAGGAAATGT
CACATTTGGTGAAGTTGTATTCAACTATCCACCCGACCGGACATCCAGTGCTTCAGGGACTGAGCCTGGAGGT

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FIGURE 685B

GAAGAAGGGCCAGACGCTGGCTCTGGTGGGCAGCAGTGGCTGTGGGAAGAGCACAGTGGTCCAGCTCCTGGAGCG
GTTCTACGACCCCTTGGCAGGGAAAGTGCTGCTTGATGGCAAAGAAATAAAGCGACTGAATGTTCAGTGGCTCCG
AGCACACCTGGGCATCGTGTCCCAGGAGCCCATCCTGTTTGA CTGCAGCATTGCTGAGAACATTGCCTATGGAGA
CAACAGCCGGGTGGTGTACAGGAAGAGATTGTGAGGGCAGCAAAGGAGGCCAACATACATGCCTTCATCGAGTC
ACTGCCTAATAAATATAGCACTAAAGTAGGAGACAAAGGAACTCAGCTCTCTGGTGGCCAGAAACAACGCATTGC
CATAGCTCGTGCCCTTGTTAGACAGCCTCATATTTTGCTTTTGGATGAAGCCACGTCAGCTCTGGATACAGAAAG
TGAAAAGGTTGTCCAAGAAGCCCTGGACAAAGCCAGAGAAGGCCGCACCTGCATTGTGATTGCTCACCGCCTGTC
CACCATCCAGAAATGCAGACTTAATAGTGGTGTTCAGAAATGGCAGAGTCAAGGAGCATGGCACGCATCAGCAGCT
GCTGGCACAGAAAGGCATCTATTTTTCAATGGTCAGTGTCCAGGCTGGAACAAAGCGCCAGTGA^{ACT}CTGACTGT
ATGAGATGTTAAATACTTTTTAATATTTGTTTAGATATGACATTTATTCAAAGTTAAAAGCAAACACTTACAGAA
TTATGAAGAGGTATCTGTTTAACATTTCTCAGTCAAGTTCAGAGTCTTCAGAGACTTCGTAATTAAAGGAACAG
AGTGAGAGACATCATCAAGTGGAGAGAAATCATAGTTTAAACTGCATTATAAATTTTATAACAGAATTAAAGTAG
ATTTTAAAAGATAAAATGTGTAATTTTGTTTATATTTCCCATTTGGACTGTA^{ACT}GACTGCCTTGCTAAAAGAT
TATAGAAGTAGCAAAAAGTATTGAAATGTTTGCATAAAGTGTCTATAATAAACTAACTTTTCATGTG

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FIGURE 686

MDLEGDRNGGAKKKNF FKLNNKSEKDKKEKKPTVSVFSMFRYSNWLDKLYMVVGTAAI IHGAGLPLMMLVFGEM
TDIFANAGNLEDLMSNITNRSDINDTGFFMNLEEDMTRYAYYYSGIGAGVLVAAYIQVSFWCLAAGRQIHKIRKQ
FFHAIMRQEIGWFDVHDVGELNTRLTDDVSKINEGIGDKIGMFFQSMATFFTGFIVGFTRGWKLTILVILAI SPVL
GLSAAVWAKILSSFTDKELLAYAKAGAVAEVLA AIRTVIAFGGQKKELERYNKNLEEAKRIGIKKAITANISIG
AAFLLIYASYALAFWYGTTLVLSGEYSIGQVLT VFSVLIGAFSVGQASPSIEAFANARGAAYEIFKIIDNKPSID
SYSKSGHKPDNIKGNLEFRNVHFSYPSRKEVKILKGLNLKVQSGQTVALVGNSGCGKSTTVQLMQRLYDPTEGMV
SVDGQDIRTINVRFLREIIGVVSQEPVLFATTIAENIRYGRENVMTDEIEKAVKEANAYDFIMKLPHKFDTLVGE
RGAQLSGGQKQRIAIARALVRNPKILLLDEATSALDTESEAVVQVALDKARKGRTTIVIAHRLSTVRNADVIAGF
DDGVIVEKGNHDELMKEKGIYFKLVMTQTAGNEVELENAADESKSEIDALEMSSNDSRSSLIRKRSTRRSVRGSQ
AQDRKLSTKEALDESIPPVSFWRIMKLNLT EWPFYFVGVFCAIINGGLQPAFAIIFSKIIGVFTRIDDPETKRQN
SNLFSLLFLALGIIISFITFFLQGFTFGKAGEILTKRLRYMVFRSMLRQDVSWFDDPKNTTGALTTRLANDAAQVK
GAIGSRLAVITQNIANLGTGIIISFIYGWQLTLLLLAIVPIIAIAGVVEMKMLSGQALKDKKELEGAGKIATEAI
ENFRTVVSLTQEQQFEHMYAQLQVPYRNSLRKAHIFGITFSFTQAMMYFSYAGCFRFGAYLVAHKLMSFEDVLL
VFSVVFGAMAVGQVSSFAPDYAKAKISAAHIIMIIEKTPLIDSYSTEGLMPNTLEGNVTFGEVVFNYPTRPDIP
VLQGLSLEVKKGQTLALVGSSGCGKSTVVQLLERFYDPLAGKVLLDGKEIKRLNVQWLR AHLGIVSQEPILFDCS
IAENIAYGDNSRVVSQEEIVRAAKEANI HAFIESLPNKYSTKVGDKGTQLSGGQKQRIAIARALVRQPHILLLDE
ATSALDTESEKVVQEALDKAREGRTCIVIAHRLSTIQNADLIVVFQNGRVKEHGTHQQLLAQKGIYFSMVS VQAG
TKRQ

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FIGURE 687

GGCAGCTGCACGGCTCCTGGCCCCGGAGCATGCGCGAGAGCCGCCCGGAGCGCCCCGGAGCCCCCGCCGTCCC
GCCCCGGGCGTCCCGCGCCCCGCGGCCAGCGCACCCCCGGACGCTATGGCCACCCCTCCGGCTGGCCCCCTTCTG
TAGGATGGTAGCACACAACCAGGTGGCAGCCGACAATGCAGTCTCCACAGCAGCAGAGCCCCGACGGCGGCCAGA
ACCTTCCTCCTCTTCCTCCTCCTCGCCCGCGGCCCCCGCGCGCCCGCGGGCCGTGCCCCGCGGTCCCGGCCCCGGC
CCCCGGCGACACGCACTTCCGCACATTCCGTTTCGCACGCCGATTACCGGCGCATCACGCGCGCCAGCGCGCTCCT
GGACGCCTGCGGATTCTACTGGGGGCCCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGCGCCGAGCCCCGTGGG
CACCTTCCTGGTGC GCGACAGCCGCCAGCGGAAC TGCTTTTTCGCCCTTAGCGTGAAGATGGCCTCGGGACCCAC
GAGCATCCGCGTGCACTTT CAGGCCGGCCGCTTTCACCTGGATGGCAGCCGCGAGAGCTTCGACTGCCTCTTCGA
GCTGCTGGAGCACTACGTGGCGGCGCCGCGCCGCATGCTGGGGGCCCCGCTGCGCCAGCGCCGCGTGCGGGCCGCT
GCAGGAGCTGTGCCGCCAGCGCATCGTGGCCACCGTGGGCGCGGAGAACCTGGCTCGCATCCCCCTCAACCCCGT
CCTCCGCGACTACCTGAGCTCCTTCCCCCTTCCAGATTTGAACCGGCAGCGCCCGCCGTGCACGCAGCATTAACTGG
GATGCCGTGTTATTTTGTATTACTTGCCCTGGAACCATGTGGGTACCCTCCCCGGCCTGGGTTGGAGGGAGCGGA
TGGGTGTAGGGGCGAGGCGCCTCCCCGCCCTCGGCTGGAGACGAGGCCGAGACCCCTTCTCACCTCTTGAGGGGG
TCCTCCCCCTCCTGGTGCTCCCTCTGGGTCCCCCTGGTTGTTGTAGCAGCTTAACTGTATCTGGAGCCAGGACCT
GAACTCGCACCTCCTACCTCTTCATGTTTACATATACCCAGTATCTTTGCACAAACCAGGGGTGGGGGAGGGTC
TCTGGCTTTATTTTTCTGCTGTGCAGAATCCTATTTTATATTTTTTAAAGTCAGTTTAGGTAATAAACTTTATTA
TGAAAGTTTTTTTTTT

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FIGURE 688

MVAHNQVAADNAVSTAAEPRRRPEPSSSSSSSPAAPARPRPCPAVPAPAPGDTHFRTFRSHADYRRITRASALLD
ACGFYWGPLSVHGAHERLRAEPVGTFLVRDSRQRNCFALSVKMASGPTSIRVHFQAGRFHLDGSRESFDCLFEL
LEHYVAAPRRMLGAPLRQRRVRPLQELCRQRIVATVGRENLARIPLNPVLRDYLSSFFPFI

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FIGURE 689

GGCAGCTGCACGGCTCCTGGCCCCGGAGCATGCGCGAGAGCCGCCCCGGAGCGCCCCGGAGCCCCCGCCGTCCC
GCCCCGCGGCGTCCCCGCGCCCCGCCGCCAGCGCACCCCCGGACGCTATGGCCCCACCCCTCCGGCTGGCCCCCTTCTG
TAGGATGGTAGCACACAACCAGGTGGCAGCCGACAATGCAGTCTCCACAGCAGCAGAGCCCCGACGGCGGCCAGA
ACCTTCCTCCTCTTCTCCTCCTCGCCCCGCGGCCCCCGCGCGCCCCGCGGCCGTGCCCCGCGGTCCCGGCCCGGC
CCCCGGCGACACGCACTTCCGCACATTCCGTTTCGCACGCCGATTACCGGGCGCATCACGCGCGCCAGCGCGCTCCT
GGACGCCTGCGGATTCTACTGGGGGCCCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGCGCCGAGCCCCGTGGG
CACCTTCCTGGTGC GCGACAGCCGCCAGCGGA ACTGCTTTTTCGCCCTTAGCGTGAAGATGGCCTCGGGACCCAC
GAGCATCCGCGTGCACCTTTCAGGCCGGCCGCTTTCACCTGGATGGCAGCCGCGAGAGCTTCGACTGCCTCTTCGA
GCTGCTGGAGCACTACGTGGCGGCGCCGCGCCGCATGCTGGGGGCCCCGCTGCGCCAGCGCCGCGTGC GGGCCGCT
GCAGGAGCTGTGCCGCCAGCGCATCGTGGCCACCGTGGGCGCGAGAACCTGGCTCGCATCCCCCTCAACCCCGT
CCTCCGCGACTACCTGAGCTCCTTCCCCCTCCAGATTTGACCGGCAGCGCCCCGCCGTGCACGCAGCATTA ACTTG
GATGCCGTGTTATTTTGTATTACTTGCCTGGAACCATGTGGGTACCCTCCCCGGCCTGGGTTGGAGGGAGCGGA
TGGGTGTAGGGGCGAGGCGCTCCCGCCCTCGGCTGGAGACGAGGCCGAGACCCCTTCTCACCTCTTGAGGGGG
TCCTCCCCCTCCTGGTGCTCCCTCTGGGTCCCCCTGGTTGTTGTAGCAGCTTA ACTGTATCTGGAGCCAGGACCT
GAACTCGCACCTCCTACCTCTTCATGTTTACATATACCCAGTATCTTTGCACAAACCAGGGGTTGGGGGAGGGTC
TCTGGCTTTATTTTCTGCTGTGCAGAATCCTATTTTATATTTTAAAGTCAGTTTAGGTAATAAACTTTATTA
TGAAAGTTTTTTTTTT

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FIGURE 690

MVAHNQVAADNAVSTAAEPRRRPEPSSSSSSSPAAPARPRPCPAVPAPAPGDTHFRTFRSHADYRRITRASALLD
ACGFYWGPLSVHGAHERLRAEPVGTFLVRDSRQRNCFALSVKMASGPTsirvHFQAGRFHLDGSRESFDCLFEL
LEHYVAAPRRMLGAPLRQRRVRPLQELCRQRIVATVGRENLARIPLNPFVLRDYLSSFPFQI

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FIGURE 691A

ATGGCTGGCGGAGCCTGGGGCCGCTGGCCTGTTACTTGGAGTTCCTGAAGAAGGAGGAGCTGAAGGAGTTCAG
CTTCTGCTCGCCAATAAAGCGCACTCCAGGAGCTCTTCGGGTGAGACACCCGCTCAGCCAGAGAAGACGAGTGGC
ATGGAGGTGGCCTCGTACCTGGTGGCTCAGTATGGGGAGCAGCGGGCCTGGGACCTAGCCCTCCATACCTGGGAG
CAGATGGGGCTGAGGTCACTGTGCGCCCAAGCCAGGAAGGGGCAGGCCACTCTCCCTCATTCCCTACAGCCCA
AGTGAACCCACCTGGGGTCTCCAGCCAACCCACCTCCACCGCAGTGCTAATGCCCTGGATCCATGAATTGCCG
GCGGGGTGCACCCAGGGCTCAGAGAGAAGGGTTTGTAGACAGCTGCCTGACACATCTGGACGCCGCTGGAGAGAA
ATCTCTGCCTCACTCCTCTACCAAGCTCTTCCAAGCTCCCCAGACCATGAGTCTCCAAGCCAGGAGTCACCCAAC
GCCCCACATCCACAGCAGTGCTGGGGAGCTGGGGATCCCCACCTCAGCCAGCCTAGCACCAGAGAGCAGGAG
GCTCCTGGGACCCAATGGCCTCTGGATGAAACGTCAGGAATTTACTACACAGAAATCAGAGAAAGAGAGAGAGAG
AAATCAGAGAAAGGCAGGCCCCCATGGGCAGCGGTGGTAGGAACGCCCCACAGGCGCACACCAGCCTACAGCCC
CACCACCACCCATGGGAGCCTTCTGTGAGAGAGAGCCTCTGTTCCACATGGCCCTGGAAAAATGAGGATTTTAAC
CAAAAATTACACAGCTGCTACTTCTACAAAGACCTCACCCAGAACCAAGATCCCCTGGTCAAGAGAAGCTGG
CCTGATTATGTGGAGGAGAATCGAGGACATTTAATTGAGATCAGAGACTTATTTGGCCAGGCCTGGATACCCAA
GAACCTCGCATAGTCATACTGCAGGGGGCTGCTGGAATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGGAAGCC
TGGGGGAGAGGCCAGCTGTATGGGGACCGCTTCCAGCATGTCTTCTACTTCAGCTGCAGAGAGCTGGCCAGTCC
AAGGTGGTGAGTCTCGCTGAGCTCATCGGAAAAGATGGGACAGCCACTCCGGCTCCATTAGACAGATCCTGTCT
AGGCCAGAGCGGTGCTCTTCATCCTCGATGGTGTAGATGAGCCAGGATGGGTCTTGAGGAGCCGAGTTCTGAG
CTCTGTCTGCACTGGAGCCAGCCACAGCCGGCGGATGCACTGCTGGGCAGTTTGCTGGGGAAACTATACTTCCC
GAGGCATCCTTCTGATCACGGCTCGGACCACAGCTCTGCAGAACCTCATTCTTCTTTGGAGCAGGCACGTTGG
GTAGAGGTCTGGGGTTCTCTGAGTCCAGCAGGAAGGAATATTTCTACAGATATTTACAGATGAAAGGCAAGCA
ATTAGAGCCTTTAGGTTGGTCAAATCAAACAAAGAGCTCTGGGCCCTGTGTCTTGTGCCCTGGGTGTCTGGCTG
GCCTGCACTTGCCCTGATGCAGCAGATGAAGCGGAAGGAAAACTCACACTGACTTCCAAGACCACCACAACCCCTC
TGTCTACATTACCTTGCCAGGCTCTCCAAGCTCAGCCATTGGGACCCAGCTCAGAGACCTCTGCTCTCTGGCT
GCTGAGGGCATCTGGCAAAAAAGACCCTTTTTTCAGTCCAGATGACCTCAGGAAGCATGGGTTAGATGGGGCCATC
ATCTCCACCTTCTTGAAGATGGGTATTCTTCAAGAGCACCCCATCCCTCTGAGCTACAGCTTCATTACCTCTGT
TTCCAAGAGTTCTTTGCAGCAATGTCTATGTCTTGGAGGATGAGAAGGGGAGAGGTAAACATTCTAATTGCATC
ATAGATTTGGAAAAGACGCTAGAAGCATATGGAATACATGGCCTGTTTGGGGCATCAACCACACGTTTCTATTG
GGCTGTAAAGTGATGAGGGGGAGAGAGAGATGGAGAACATCTTCACTGCCGGCTGTCTCAGGGGAGGAACCTG
ATGCAGTGGGTCCCGTCCCTGCAGCTGCTGCTGCAGCCACACTCTCTGGAGTCCCTCCACTGCTTGTACGAGACT
CGGAACAAAACGTTCCCTGACACAAGTGATGGCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAG
CTCTTAGTGTGCACITTTCTGCATTAAATTACCCGCCACGTGAAGAAGCTTCAGCTGATTGAGGGCAGGCAGCAC
AGATCAACATGGAGCCCCACCATGGTAGTCTGTTTCAGGTGGGTCCCAGTCAAGATGCCTATTGGCAGATTCTC
TTCTCCGTCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAAACTCGCTGAGCCACTCTGCAGTG
AAGAGTCTTTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCTGCGGTTGGCTGGCTGTGGCCTCACA
GCTGAGGACTGCAAGGACCTTGCCTTTGGGCTGAGAGCCAACCAGACCCCTGACCGAGCTGGACCTGAGCTTCAAT
GTGCTCACGGATGCTGGAGCCAAACACCTTGGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAG
CTGGTCAGCTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCAGCCTGAAG
GAGCTAGACCTGCAGCAGAACAACTGGATGACGTTGGCGTGCAGCTGCTCTGTGAGGGGCTCAGGCATCCTGCC
TGAAACTCATACGCTGGGGCTGGACCAGACAACTCTGAGTGATGAGATGAGGCAGGAACCTGAGGGCCCTGGAG
CAGGAGAAACCTCAGCTGCTCATCTTCAGCAGACGGAAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACG
GGAGAGATGAGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCT
CAGGCTAATCTCAAACCTCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGAGGAAAGCTCCCCAGAG
GTAGTACCGGTGGAACCTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGGACT
GACGATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGACCGAGTT
CACTTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACCGTT
GAGATTGAATTCTGTGTGTGGGACCAGTTCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGGCCT
CTGCTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCACTTTGTGGCTCTCCAAGGGGGC
CATGTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGGGTG

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FIGURE 691B

GAGCTGCATCACATAGTTCTGGAAAACCCAGCTTCTCCCCCTTGGGAGTCCTCCTGAAAATGATCCATAATGCC
CTGCGCTTCATTCCCGTCACCTCTGTGGTGTTGCTTTACCACCGCGTCCATCCTGAGGAAGTCACCTTCCACCTC
TACCTGATCCCAAGTGACTGCTCCATTTCGGAAGGCCATAGATGATCTAGAAATGAAATTCCAGTTTGTGCGAATC
CACAAGCCACCCCGCTGACCCCACTTTATATGGGCTGTCGTTACACTGTGTCTGGGTCTGGTTTCAGGGATGCTG
GAAATACTCCCCAAGGAACTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTCTCGGAGTTCTACGTT
GGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTGTGGGAGGCCTTGGTG
AAACCAGGAGATCTCATGCCTGCAACTACTCTGATCCCTCCAGCCCGCATAGCCGTACCTTCACCTCTGGATGCC
CCGCAGTTGCTGCACTTTGTGGACCAGTATCGAGAGCAGCTGATAGCCCGAGTGACATCGGTGGAGGTTGTCTTG
GACAAACTGCATGGACAGGTGCTGAGCCAGGAGCAGTACGAGAGGGTGCTGGCTGAGAACACGAGGCCAGCCAG
ATGCGGAAGCTGTTTCAGCTTGAGCCAGTCTGGGACCGGAAGTGCAAAGATGGACTCTACCAAGCCCTGAAGGAG
ACCCATCCTCACCTCATTATGGAACCTCTGGGAGAAGGGCAGCAAAAAGGGACTCCTGCCACTCAGCAGCTGAAGT
ATCAACACCAGCCCTTGACCCTTGAGTCTGGCTTTGGCTGACCCTTCTTTGGGTCTCAGTTTCTTTCTCTGCAA
ACAAGTTGCCATCTGGTTTGCCTTCCAGCACTAAAGTAATGGAACCTTGATGATGCCTTTGCTGGGCATTATGTG
TCCATGCCAGGGATGCCACAGGGGGCCCCAGTCCAGGTGGCCTAACAGCATCTCAGGGAATGTCCATCTGGAGCT
GGCAAGACCCCTGCAGACCTCATAGAGCCTCATCTGGTGGCCACAGCAGCCAAGCCTAGAGCCCTCCGGATCCCA
TCCAGGCGCAAAGAGGAATAGGAGGGACATGGAACCATTTCCTCTGGCTGTGTACAGGGTGAGCCCCAAAATT
GGGGTTCAGCGTGGGAGGCCACGTGGATTCTTGGCTTTGTACAGGAAGATCTACAAGAGCAAGCCAACAGAGTAA
AGTGGAAGGAAGTTTATTCAGAAAATAAAGGAGTATCACAGCTCTTTTAGAATTGTCTAGCAGGCTTTCAGTT
TTTACCAGAAAACCCCTATAAATTAAAAATTTTTTACTTAAATTTAAGAATTAAAAAAATACAAAAAAGAAAAA
TGAAAATAAAGGAATAAGAAGTTACCTACTCCAAAAA

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FIGURE 692

MAGGAWGRLACYLEFLKKEELKEFQLLLANKAHSRSSSGETPAQPEKTSGMEVASYLVAQYGEQRAWDLALHTWE
QMGLRSLCAQAQEGAGHSPSPFPYSPSEPHLGSPSQPTSTAVLMPWIHELPAAGCTQGSERRVLRQLPDTSGRRWRE
ISASLLYQALPSSPDHESPSQESPNAPTSTAVLGSWGSPQPQSLAPREQEAPGTQWPLDETSGIYYTEIRERERE
KSEKGRPPWAAVVGTPPQAHTSLQPHHPWEPSVRESLCSTWPWKNEFDNQKFTQLLLLQRPHPRSQDPLVKRSW
PDYVEENRGHLIEIRDLFPGGLDTQEPRIVILQGAAGIGKSTLARQVKEAWGRGQLYGDRFQHVYFSCRELAQS
KVVSLAELIGKDGATATPAPIRQILSRPERLLFILDGVDEPGWVLQEPSSSELCLHWSQPQPADALLGSLLGKTILP
EASFLITARTTALQNLIPSLEQARWVEVLGFSESSRKEYFYRYFTDERQAIRAFRLVKSNNKELWALCLVPWVSWL
ACTCLMQMKRKEKLTLSKTTTTLCLHYLAQALQAQPLGQPLRDLCSLAAEGIWQKKTLSFDDLRKHGLDGA
ISTFLKMGILQEHPILSYSFIHLCFQEFFAAMSYVLEDEKGRGKHSNCI IDEKTL EAYGIHGLFGASTTRFL
GLLSDEGEREMENIFHCRLSQGRNLMQWVPSLQLLLQPHSLESLSHCLYETRNTFLTQVMAHFEEMGMCVETDME
LLVCTFCIKFSRHVKKLQIEGRQHRSTWSPTMVVLFWRVPTDAYWQILFSVLKVTRNLKELDLSGNSLSHSAV
KSLCKTLRRPRCLLETTLRLAGCGLTAEDCKDLAFGLRANQTLTELDLSFNVLTADAGAKHLCQRLRQPSCKLQRLQ
LVSCGLTSDCCQDLASVLSASP SLKELDLQNNLDDVGVRLLCEGLRHPACKLIRLGLDQTTLSDEMRQELRALE
QEKPQLLIFSRRKPSVMTPTTEGLDTGEMSNSTSSLKRQRLGSERAASHVAQANLKLLDVSKIFPIAEIAEESSPE
VVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGPVATEVVDKEKNLYRVHFPVAGSYRWPNTGLCFVMREAVTV
EIEFCVWDQFLGEINPQHSWMVAGPLLDIKAEPGAVEAVHLPHFVALQGQGHVDTSLFQMAHFKEEGMLLEKPARV
ELHHIVLENPSFSPGLVLLKMIHNALRFIPVTSVVLLYHRVHPEEVTFHLYLIPSDCSIRKAIDDLKMFQFVRI
HKPPPLTPLYMGCRYTVSGSGSGMLEILPKELELCYRSPGEDQLFSEFYVGH LGSGIRLQVKDKKDETLVWEALV
KPGDLMPATTLIPPARIAVPSPLDAPQLLHFVDQYREQLIARVTSVEVVLDKLHGQVLSQEYQYERVL AENTRPSQ
MRKLFSLSQSWDRKCKDGLYQALKETHPHLIMELWEKGSKKGLLPLSS

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FIGURE 693

CGCGGCGGCGCGGAGCTCGGGCGGCCGTGGAGGAACTCAGCCTCGGCCGCAGGAGGCGCCGGGAGCGGAGCCGCC
GGGAGTCGCGCAACAGGTTTCTTCTCCATCCGTGCGCCACAGGGGACGCGCGCCCTGCCGGGAGAGGGGCTTC
TCGGTTCGCACTCTCGCTCCCAGTCCAGGCAAAATGAAAGACCGGCTAGCAGAACTTCTGGACTTGTCCAAGCAA
TATGACCAGCAGTTCCCAGACGGGGACGATGAGTTTGAATCGCCCCACGAGGACATCGTGTTTCGAGACGGACCAC
ATCCTGGAGTCCCTGTACCGAGACATCCGGGACATTCAGGATGAAAACAGCTGCTGGTGGCCGACGTGAAGCGG
CTGGGAAAGCAGAACGCCCCGCTTCCTCACGTCCATGCGGCGCCTCAGCAGCATCAAGCGCGACACCAACTCCATC
GCCAAGGCCTTCAGGGCCCGGGGCGAGGTCATCCACTGCAAGCTGCGCGCCATGAAGGAGCTGAGCGAGGCGGCT
GAGGCCCAGCACGGCCCGCACTCGGCAGTGGCGCGCATTTTCGCGGGCGCAGTACAACGCGCTCACCCCTCACCTTC
CAGCGCGCCATGCACGACTACAACCAGGCCGAGATGAAGCAGCGCGACAACCTGCAAGATCCGCATCCAGCGCCAG
CTGGAGATCATGGGCAAGGAAGTCTCGGGCGACCAGATCGAGGACATGTTTCGAGCAGGGTAAGTGGGACGTGTTT
TCCGAGAACTTGCTGGCCGACGTGAAGGGCCGCGGGCCGCCACAACGAGATCGAGAGCCGCCACCGCGAACTGC
TGCGCCTGGAGAGCCGCCATCCGCGACGTACACGAGCTCTTCTTGAGATGGCGGTGCTGGTGGAGAAGCAGGCC
GACACCCTGAACGTATCGAGCTCAACGTACAAAAGACGGTCGACTACACCGGCCAGGCCAAGGCGCAGGTGCGG
AAGGCCGTGCAGTACGAGGAGAAGAACCCCTGCCGGACCTCTGCTGCTTCTGCTGTCCCTGCCTCAAGTAGCAG
GCCGGCCCGGGCCGCCACCGCCCATCCCAGACCATGGAGCGCGCTGGGAAGGACGCACCAAAGCCGGGAGCTCTG
CCCTGCAGGGAGTTGCCCAACCCCTTCCGGAACTCAGTCTTTAGAAAAGAAACGCCAGGTTCAAGAATTGCAAA
CCAGCCTGTGCTTGGAAAGATGGTTAGTTGATACCGTCCGATGATTCTTCAGTAAAGATAGATTCCCACCTCGTG
CCGAA

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FIGURE 694

MKDRLAELLDSLKQYDQQFPDGDDEFDSPHEDIVFETDHILES LYRDIRDIQDENQLLVADV KRLGKQ NARFLTS
MRRLLSSIKRDTNSIAKAFRARGEVIHCKLRAMKELSEAAEAQHGP HSAVARISRAQYNALTTLTFQ RAMHDYNQAE
MKQRDNCKIRIQRQLEIMGKEVSGDQIEDMFEQGKWDVFSENLLADV KGRGPPTTRSRAATANCCAWRAAIRDVH
ELFLQMAVLVEKQADTLNVIELNVQKTVDYTGQAKAQVRKAVQYEEKNPCRTLCCFCCPCLK

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FIGURE 695

AGTTCCCCGACATCAAGTCACGCATTGCCAAGCGGGGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACT
ACGAGTCCCTTCAAAGTCCAAAAAGGAAGGATGAAGCCAAAATTGCCAAGCCTGTCTCGCTGCTTGAGAAAGCCG
CCCCCAGTGGTGCCAAGGCAAAGTGCAGGCTCATCTCGTAGCTCAAACCTAACCTGCTCCGAAATCAGGCCGAGG
AGGAGCTCATCAAAGCCCAGAAGGTGTTTGAGGAGATGAATGTGGATCTGCAGGAGGAGCTGCCGTCCCTGTGGA
ACAGCCGCGTAGGTTTCTATGTCAACACGTTCCAGAGCATCGCGGGCCTGGAGGAAAACCTCCACAAGGAGATGA
GCAAGCTCAACCAGAACCTCAATGATGTGCTGGTCGGCCTGGAGAAGCAACACGGGAGCAACACCTTCACGGTCA
AGGCCAGCCCAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCTCCAGATGGCTCCCTGCCGCCA
CCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCCGGGGCCACCTCCCAAGTCCC
CATCTCAGCTCCGGAAGGCCACCACTCCCTCCGCCTCCCAAACACACCCCGTCCAAGGAAGTCAAGCAGGAGC
AGATCCTCAGCCTGTTTGAGGACACGTTTGTCCCTGAGATCAGCGTGACCAACCCCTCCAGTTTGAGGCCCGG
GGCCTTTCTCGGAGCAGGCCAGTCTGCTGGACCTGGACTTTGACCCCTCCCGCCCGTGACGAGCCCTGTGAAGG
CACCCACGCCCTCTGGTCAGTCAATTCCATGGGACCTCTGGGAGCCCACAGAGAGTCCAGCCGGCAGCCTGCCTT
CCGGGGAGCCCAGCGCTGCCGAGGGCACCTTTGCTGTGTCTGGCCCAGCCAGACGGCCGAGCCGGGGCCTGCC
AACCAGCAGAGGCCTCGGAGGTGGCGGGTGGGACCCAACCTGCGGCTGGAGCCCAGGAGCCAGGGGAGACGGCGG
CAAGTGAAGCAGCCTCCAGCTCTCTTCTGCTGTCTGCTGGTGGAGACCTTCCAGCAACTGTGAATGGCACCCTGG
AGGGCGGCAGTGGGGCCGGGCGCTTGGACCTGCCCCAGGTTTCATGTTCAAGGTACAGGCCCAGCACGACTACA
CGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGATGTGGTGCTGGTGATCCCTTCCAGAACCCTGAAG
AGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCACAAGGAGCTGGAGAAGTGCCGTG
GCGTCTTCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGCAGCCTCCGGGCGTGTGAAGAAC
ACCTCCTCCCGAAAAATGTGTGGTTCTTTTTTTTGTGTTTTCGTTTTTCATCTTTGAAGAGCAAAGGGAAA
TCAAGAGGAGACCCCCAGGCAGAGGGGCGTTCTCCAAAGATTAGGTGCTTTTCCAAAGAGCCGCGTCCCGGCAA
GTCCGGCGGAATTCACCAGTGTTCCTGAAGCTGCTGTGTCTCTAGTTGAGTTTCTGGCGCCCTGCCTGTGCCC
GCATGTGTGCTGGCCGAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTTGCTGAAGCTTCGGCCGCGCCA
CCCGGGCAAGGGTCTCTTTTCTGGCAGCTGCTGTGGGTGGGGCCAGACACCAGCCTAGCCTGGCTCTGCCCC
GCAGACGGTCTGTGTGCTGTTTGAATAAATCTTAGTGTTCAAAACAAAATGAAACAAAAAAAATGAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 696

GCTGGAGG**ATG**TGGCTGCAGAGCCTGCTGCTCTTGGGCACTGTGGCCTGCAGCATCTCTGCACCCGCCCGCTCGC
CCAGCCCCAGCACGCAGCCCTGGGAGCATGTGAATGCCATCCAGGAGGCCCGGCGTCTCCTGAACCTGAGTAGAG
AACTGCTGCTGAGATGAATGAAACAGTAGAAGTCATCTCAGAAATGTTTGACCTCCAGGAGCCGACCTGCCTAC
AGACCCGCCTGGAGCTGTACAAGCAGGGCCTGCGGGGCAGCCTCACCAAGCTCAAGGGCCCCCTTGACCATGATGG
CCAGCCACTACAAGCAGCACTGCCCTCCAACCCCGGAACTTCCTGTGCAACCCAGACTATCACCTTTGAAAGTT
TCAAAGAGAACCTGAAGGACTTTCTGCTTGTCATCCCCTTTGACTGCTGGGAGCCAGTCCAGGAG**TGAG**ACCGGC
CAGATGAGGCTGGCCAAGCCGGGGAGCTGCTCTCTCATGAAACAAGAGCTAGAAACTCAGGATGGTCATCTTGGA
GGGACCAAGGGGTGGGCCACAGCCATGGTGGGAGTGGCCTGGACCTGCCCTGGGCCACACTGACCCTGATACAGG
CATGGCAGAAGAATGGGAATATTTTATACTGACAGAAATCAGTAATATTTATATATTTATATTTTTAAATATTT
ATTTATTTATTTATTTAAGTTCATATTCATATTTATTCAAGATGTTTTACCGTAATAATTATTATTAAAAATAT
GCTTCT

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FIGURE 697

MWLQSLLLLGTVACSIAPARSPSPSTQPWEHVNAIQEARLLNLSRDTAAEMNETVEVISEMFDLQEPTCLQTR
LELYKQGLRGSLTKLKGPLTMMASHYKQHCPTPETSCATQTITFESFKENLKDFLLVIPFDCWEPVQE

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FIGURE 698

AGTTACGTTTCGGGGCGTGGCCGGGAGCACGTTGGCTCCGCCCCCTGGCGGCTGCCTCAGCGGCGGCGGCGGCGCA
GGCTCAGAGCAGACCCCGCCCGGCGAGGAGGAGGGAGGGCCGCCAGTGTGACATGCTGCTGGAGGAGGTTTCGCG
CCGGCGACCGGCTGAGTGGGGCGGCGGCCCGGGGCGACGTGCAGGAGGTGCGCCGCCTTCTGCACCGCGAGCTGG
TGCATCCCGACGCCCTCAACCGCTTCGGCAAGACGGCGCTGCAGGTCATGATGTTTGGCAGCACCGCCATCGCCC
TGGAGCTGCTGAAGCAAGGTGCCAGCCCCAATGTCCAGGACACCTCCGGTACCAGTCCAGTCCATGACGCAGCCC
GCACTGGATTCTTGGACACCCTGAAGGTCCTAGTGGAGCACGGGGCTGATGTCAACGTGCCTGATGGCACCGGGG
CACTTCCAATCCATCTGGCAGTTCAAGAGGGTCACACTGCTGTGGTCAGCTTTCTGGCAGCTGAATCTGATCTCC
ATCGCAGGGACGCCAGGGGTCTCACACCCTTGGAGCTGGCACTGCAGAGAGGGGCTCAGGACCTCGTGGACATCC
TGCAGGGCCACATGGTGGCCCCGCTGTGATCTGGGGTCACCCTCTCCAGCAAGAGAACCCCGTGGGGTTATGTAT
CAGAAGAGAGGGGAAGAAACACTTTCTCTTCTTGTCTCTCTGCCCCACTGCTGCAGTAGGGGAGGAGCACAGTTT
GTGGCTTATAGGTGTTGGTTTTGGGGGTGTGAGTGTGTGGGGGACGTTTCTCATTGTGTTTTCTCACTCCTTTTG
GTGTGTTGGACAGAGAAGGGCTCCTGCAGGCCACAGCCACCTAAACGGTTCAGTTTCTTCTGCGCCTCAGGCTGC
TGGGGCCTCAGACGAGACCCAAGGGCAGAGCATTTAAGAGTGAAGTCATGACCTCCAGGGAGCCTAGAAGCTGGT
GGCCTTGGCCGGCTGTGCTCAGAGACCTGAAGTGTGCACGTTGCTTCAGGCATGGGGGGTGGGGGGAGCGTCCCA
AATCAATAAGAAGGTAGAATGAGTTATGAGTTATTCATATTCTGTTGGAAGCTTGTTTTCCAGTCTCTTGTACAG
CGTTTTAAAGAAATGGATTCTATTTATTATGCTTTATTGAAAAAATGTTGTAATAATTTAATGTTTTTACCCA
TTAAATTAAGACTTGTGCATGATCAAAAAAAAAAAAAAAAAA

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FIGURE 699

MLLEEVRA GDRLSGAAARGDVQEVRRLLHREL VHPDALNRFGKTALQVMMFGSTAIALELLKQGASPNVQDTSGT
SPVHDAARTGFLDTLKV LVEHGADVNVDPGTGALPIHLAVQEGHTAVVSFLAAESDLHRRDARGLTPLELALQRG
AQDLVDILQGHMVAPL

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FIGURE 700

GGGGAGATCTTAGCTGAAG**ATG**ACTGACAGTGTTATTTATTCCATGTTAGAGTTGCCTACGGCAACCCAAGCCCA
GAATGACTATGGACCACAGCAAAAATCTTCCTCTTCCAGGCCTTCTTGTTCTTGCCTTGTGGCAATAGCTTTGGG
GCTTCTGACTGCAGTTCTTCTGAGTGTGCTGCTATACCAGTGGATCCTGTGCCAGGGCTCCAATACTCCACTTG
TGCCAGCTGTCCTAGCTGCCCAGACCGCTGGATGAAATATGGTAACCATTTGTTATTATTTCTCAGTGGAGGAAAA
GGACTGGAATTCTAGTCTGGAATTCTGCCTAGCCAGAGACTCACACCTCCTTGTGATAACGGACAATCAGGAAAT
GAGCCTGCTCCAAGTTTTCTCAGTGAGGCCTTTTGCTGGATTGGTCTGAGGAACAATTCTGGCTGGAGGTGGGA
AGATGGATCACCTCTAACTTCTCAAGGATTTCTTCTAATAGCTTTGTGCAGACATGCGGTGCCATCAACAAAAA
TGGTCTTCAAGCCTCAAGCTGTGAAGTTCCTTTACACTGGGTGTGTAAGAAGTGTCCCTTTGCAGATCAAGCTTT
ATTCT**TGA**AGAATAAACCTAGCTGGCATGCTGGTGTGTACCTGTAGTCCTAGCTATTTGGGAAGCTGAGGTGGGAG
GGTCGCTTGAGCCCAGGAGTTTGAGGGCTGCAGTGAGCTATGATTGTGCCACTGTACTCCAGCCTGGGAGATAGAG
CAAGACTCCATCTCTAAAAAAAAAAAAAAAAATGCTAATGTGAGAATATAAATTGTGGGAAATGAGTGAGGGCAAGG
TGGTACTTCCTCCTTCTGAGCTCTTCACACGTAATGCAAAAACCCGGTCTTAAGTGAATTTGTTTTTTTTCTGAG
TATGCATATATGTGGTTGAATGAACCAATGTGTGATTGTATCTTTTCCATTATGTGACTGTTTGACCTGCATATT
AATTTCAAGATAGCAGTCAATTCGATAAGGCATTTTCATAGAGGAAAGTTTACAGAAACAGTTTATGTGGTTGGA
TCACCAAATTATCTTAGGTACTAAGGCCTCAAAAATAAGAAAACTTTATTATTTCTCCTCAGTAGAGTTTGGAC
ATACATAAGGAGAGAAGGTACAGTGATGAAGGAGACCATAATTCTGTAGTGTTGATGATCCTGGATTATAATCTT
TTTCTCTTTATCTTTTCATAGTTTTTTTAAAAACATGGACTGTATCTTATCTACCACTATATCCCAAATACCTAAG
ATAGTGCTTACGTTCAGTGACTATTAAATAAATAAATGGATGAATTAATAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 701

MTDSVIYSMLELPTATQAQNDYGPQOKSSSSRPSCSCLVAIALGLLTAVLLSVLLYQWILCQGSNYSTCASCPS
PDRWMKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSGWRWEDGSPLN
FSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKCPFADQALF

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FIGURE 702

TGAAGATCAGCTATTAGAAGAGAAAGATCAGTTAAGTCCTTTGGACCTGATCAGCTTGATACAAGAACTACTGAT
TTCAACTTCTTTGGCTTAATTCTCTCGGAAACGATGAAATATACAAGTTATATCTTGGCTTTTCAGCTCTGCATC
GTTTTGGGTTCTCTTGGCTGTTACTGCCAGGACCCATATGTAAAAGAAGCAGAAAAACCTTAAGAAATATTTTAAT
GCAGGTCATTGAGATGTAGCGGATAATGGAACCTCTTTTCTTAGGCATTTTGAAGAATTGGAAAGAGGAGAGTGAC
AGAAAAATAATGCAGAGCCAAATTGTCTCCTTTTACTTCAAACCTTTTAAAACTTTAAAGATGACCAGAGCATC
CAAAAGAGTGTGGAGACCATCAAGGAAGACATGAATGTCAAGTTTTTCAATAGCAACAAAAAGAAACGAGATGAC
TTCGAAAAGCTGACTAATTATTCGGTAACTGACTTGAATGTCCAACGCAAAGCAATACATGAACTCATCCAAGTG
ATGGCTGAACTGTCGCCAGCAGCTAAACAGGGAAGCGAAAAAGGAGTCAGATGCTGTTTCAAGGTCGAAGAGCA
TCCCAGTAAATGGTTGTCCTGCCTGCAATATTTGAATTTTAAATCTAAATCTATTTATTAATATTTAACATTATTT
ATATGGGGAATATATTTTTAGACTCATCAATCAAATAAGTATTTATAATAGCAACTTTTGTGTAATGAAAATGAA
TATCTATTAATATATGTATTATTTATAATTCCTATATCCTGTGACTGTCTCACTTAATCCTTTGTTTTCTGACTA
ATTAGGCAAGGCTATGTGATTACAAGGCTTTATCTCAGGGGCCAACTAGGCAGCCAACCTAAGCAAGATCCCATG
GGTTGTGTGTTTATTTCACTTGATGATACAATGAACACTTATAAGTGAAGTGATACTATCCAGTTACTGCCGGTT
TGAAAATATGCCTGCAATCTGAGCCAGTGCTTAAATGGCATGTGAGACAGAACTTGAATGTGTCAGGTGACCCTG
ATGAAAACATAGCATCTCAGGAGATTTTCATGCCTGGTGCTTCCAAATATTGTTGACAACGTGACTGTACCCAAA
TGGAAAGTAACTCATTTGTTAAAATTATCAATATCTAATATATATGAATAAAGTGTAAGTTCACAACT

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FIGURE 703

MKYTSYILAFQLCIVLGSLGCYCQDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQSQIVSF
YFKLFKNFKDDQSIQKSVEIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVQRKAIHELIQVMAELSPAAGT
KRKRSQMLFQGRRASQ

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FIGURE 704

GTTTGAGCAGCATTGTTAGAGCCTGTGGAAAACACTTTACAACCTGTGTAACCTGTCTTCATCTTTACAGAGGAATA
GTCTACAAAGGAAGACTTGTAACCTGGAGAAGAGACCTGTCATTTACTCCATCCTTTATAGTGATGCTACAGGAC
GAAGAGGAATGGATAAAAAACATTGGCGAGCAACTCAATAAAGCGTATGAAGCCTTCCGGCAGGCATGCATGGATA
GAGATTCTGCAGTAAAAGAATTACAGCAAAAGACTGAGAAGCTATGAGCAGAGAATACGTGAACAACAGGAACAGC
TGTCACCTTCAACAGACTATTATTGACAAGCTAAAATCTCAGTTACTTCTTGTGAATTCCACTCAAGATAACAATT
ATGGCTGTGTTTCTCTGCTTGAAGACAGTGAACAAGAAAGAATAATTTGACTCTTGATCAGCCACAAGATAAAG
TGATTTTCAGGAATAGCAAGAGAAAACTACCAAAGGTAAGAAGACAAGAGGTTTCTTCTCCTAGAAAAGAACTT
CAGCAAGGAGTCTTGGCAGTCCCTTGCTCCATGAAAGGGTAATATAGAGAAGACTTTCTGGGATCTGAAAGAAG
AATTTTCATAAAATATGCATGCTAGCAAAAGCACAGAAAGACCACTTAAGCAAACCTTAATATACCAGACACTGCAA
CTGAAACACAGTGCTCTGTGCCCTATACAGTGTACGGATAAAACAGATAAACAAGAAGCGCTGTTTAAGCCTCAGG
CTAAAGATGATATAAAATAGAGGTGCACCATCCATCACATCTGTACACCAAGAGGACTGTGCAGAGATGAGGAAG
ACACCTCTTTTGAATCACTTTCTAAATTCAATGTCAAGTTTCCACCTATGGACAATGACTCAACTTTCTTACATA
GCACTCCAGAGAGACCCGGCATCCCTTAGTCTGCCACGTCTGAGGCAGTGTGCCAAGAGAAATTTAATATGGAGT
TCAGAGACAACCCAGGGAACTTTGTTAAAACAGAAGAACTTTATTTGAAATTCAGGGAATTGACCCCATAGCTT
CAGCTATACAAAACCTTAAAAACAACCTGACAAAACAAAGCCCTCAAATCTCGTAAACACTTGTATCAGGACAACCTC
TGGATAGAGCTGCGTGTTTGCCACCTGGAGACCATAATGCATTATATGTAAATAGCTTCCCACTTCTGGACCCAT
CTGATGCACCTTTTCCCTCACTCGATTCCCCGGGAAAAGCAATCCGAGGACCACAGCAGCCCATTGGAAGCCCT
TTCCTAATCAAGACAGTGACTCGGTGGTACTAAGTGGCACAGACTCAGAACTGCATATACCTCGAGTATGTGAAT
TCTGTCAAGCAGTTTTTCCCAACCATCCATTACATCCAGGGGGGATTTCCCTTCGGCATCTTAATTCACACTTCAATG
GAGAGACTTAAGACACATTTGAAAACAGACATATCAAGTTCTATGTGATGATTTTGGGTTTTTAATACTATAAAT
ACTTGATTGTAAACTAAATTCAAGATCATTATAGGAAAATCTAGTTTCACAGCTATTTGAATTTTTTCTGGAT
TTACTATATAACTCTTATTTTTTAAAAGATCATTCTGTTCTTTCAAGGAGAAATAAGCCTAAAAGAAGAAAAACA
AAAAAATTCTGTATAAACTGTAATCCTTTGTATTTCATGTTTACAGTGCTATTACTATAATTCAAAATTATGTA
TGTGACTTAGAGTTATATAATCATAATTTATGTTTTATTTCAAATATCTAAGTTTATTGCTTGGATTTCTAGTGAG
AGCTGTTGAATTTGGTGATGTCAAATGTTTCTAGGGTTTTTTTAGTTTGTGTTTTATTGAAAAATTTAATTATTTA
TGCTATAGGTGATATTCTTTGAATAAACCTATAATAGAAAATAGCAGACAACATAAACATCTTTGTAAATATC
AAACCTAATACATTTCTTGTCAGTGATAAAACAACCTGGTAGAATTATTTAAACACTTTAGATTTTTAAATAATA
TACATGGCTTTAATTTTTACTGTGTGTATAGCTACATGATGAAATTAATTAAATATTAAGAGGT

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FIGURE 705

MDKNIGEQLNKAYEAFRQACMDRDSAVKELQOKTENYEQRIREQQEQLSLQQTIIDKLKSQLLLVNSTQDNNYGC
VPLEDSETRKNNLTLDQPDQKVISGIAREKLPKVDIASAESSI

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FIGURE 706

GTCTACACCAGCGGTGTCGCTGCCCCGAAAGTGAGAGAAGGCTGATATTGCTAGCTGGAATCCAGGCCTGGGTGCT
GCATGGTGGCGCCCCCTCCCCGTGACCACCGCTGCGTTTTCTCGGGCTTTCTCTGAGGAGCTGCTCTTGTGCTGTT
TGGCCCCTGCCTACTCGGAATGGAACAAAGCATCGAACAAACAACTGAGATCCTGTTGTGCCTATCACCTGTTGA
AGTTGCCAGTCTTAAGGAAGGAATCAATTTCTTTCGCAATAAGAGCACTGGCAAAGACTACGTCTTGTACAAGAA
TAAGAGCCGACTGAGGGCATGCAAGAATATGTGCAAGCACCAGGAGGCCTGTTTCATAAAAGATATCGAGGATTT
AGCCGGAAGTTGTTGAAATGATGAAAACAACGGACTTTTGCTTTTAGAAGTGAATCCTCCTAACCCCTTGGGACT
TACAGCCCAGATCTCCTGAAGAGTTGGCTTTTGGAGAAGTACAGATAACATATCTCACTCATGCCTGCATGGACC
TCAAGTTAGGAGACAAGAGAATGGTGTGTTGACCCCTTGGTTAATCGGTCCTGCTTTTGCCCGTGGATGGTGGTTGC
TCCATGAGCCTCCATCTGATTGGCTGGAGAGGCTGTGCCAGGCAGACCTCATTACATCAGTCATCTGCACTCAG
ACCACCTGAGTTACCCACACTGAAAAAGCTTGCTGGGAGAAGACCAGATATTCCCATTTATGTTGGAAACACAG
AAAGGCCTGTATTTTGGAAATCTGAATCAGAGCGGTGTCCAGTTGACTAATATCAATGTCTGTCGCTTTGGAATAT
GGCAGCAGGTGGACAAAAATCTTCGATTTCATGATCTTGATGGACGGTGTTCATCCTGAGATGGACACTTGCATTA
TTGTGGAGTACAAAAGTTCATAAAATACTCAATATAGTAGACTGCACCAGACCCAATGGGGGAAGGCTGCCTATGA
AGGTTGCTCTAATGATGAGTGATTTTGTCTGGAGGAGCATCAGGCTTTCCAATGACTTTTCAGTGGTGGAAAAATTA
CGGAGGAATGGAAAGCCCAATTCATTAAACAGAAAGGAAGAAGCTCCTGAACTACAAGGCTCGGCTGGTGAAGA
ACCTGCAACCCCGAATTTATTGTCCCTTTGCTGGGTATTTTGTGGAATCTCACCCATCAGACAAGTACATCAAGG
AAACAAACACCAAAAAATGACCCAAATGAACCTCAACAATCTTATCAAGAAAACTCTGATGTGATAACATGGACCC
CTCGACCGGGAGCCACCCTTGATCTGGGAAGAATGCTGAAGGATCGAACAGACAGCAAGGGCATCATAGAGCCTC
CAGAGGGGACAAAAATTTACAAGGATTCCTGGGATTTTGAACCTTATTTGGAAATCTTGAATGCTGCTCTAGGAG
ATGAAATATTTCTTCACTCATCCTGGATAAAAGAATACTTCACTTGGGCTGGATTTAAAGATTACAACCTTGTGG
TCAGGATGATTGAGACAGATGAGGACTTCAATCCTTTTCTGGAGGATATGACTATTTGGTTGACTTTTTAGATT
TATCCTTCCCAAAAGAAAGACCACAACGAGAACATCCCTATGAGGAAATCCATAGCCGGGTGGATGTCATCAGAC
ACGTGGTGAAGAATGGTCTACTCTGGGATGAGTTGTATATAGGATTCCAAACACGGCTCCAGCGGGATCCTGACA
TATACCATCACCTGTTTTGGAATCATTTTCAATAAAACTCCCCCTCACACCACCCAATGGAAGTCATTCTGGA
TGTGCTGTGAGCAGAATGGGCCTGCGATTTTGCAAGAATGCAAAACCACATGAAAAATTTCAAGAATTCATGATC
TGATGCAAAATAAAAAATTTATCATTACATCTTGAACCCAGGAAGCTTACAGCAAAGAGACTATGCTTTATGACGT
CAGCAATAGATAATTCCACGTTGCCTTTGTGATTTGTATATATAGCTTACATTTGTGGATCACTACATAGCCAGA
TTCAAAAAATATTTTACTTGTTCATCCACAGTTCTCTACAGAAAGAACCAATGAACCAATAGGAACAAATTCTC
TGTGGAAAACAAAGCATAGCTGTAGTAGATACGAATCCAATCAGAGGAAACAGGAAGAGAAAAACATCCAAGA
CTACAGTGAAAATGGAATGGTCTGTTTTCGTGATATTCGTATGATTAAGATGCAATTTTTCTTAGGAAAAT
GTGATTGTTAACTAGCATTCTGTTTTACATGTTGACATTTCTAACACACACACCACTGATTGAACTTCAAAATT
TATTTTCTGATTATATATGCTAGGTCTGATTCTGAAGATACAAGAATTCAATGGTGGAATTTGTCTCCTGAAATT
TCTAGATTTCATAATTAGAAGTGTATTATTACCAACTTCTCACTTAGATTAAACATCAGTGATGTTGATTATTCTGG
TTAACCGCTCACATGCATAACAATAATGCTAGAAATTCAGGAATTATAATTTTGTGATTATACTGTGTGGTAA
TTATTCAGTTCTCACTGCAATAAAATATAATGTATATCAATGTAGGTGAGAAATGTCTATGGTGAGCAAT
AAAAGATTATTTTAAATATGAAAAAAAAAAAAAAAAA

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FIGURE 707

MDENNGLLLLLELNPPNPWDLQPRSPHEELAFGEVQITYLTHACMDLKLGDKRMVFD PWLIGPAFARGWLLHEPPS
DWLERLCQADLIYISHLHSDHLSYPTLKKLAGRRPDIPYVGNTERPVFWNLNQSGVQLTNINVVPFGIWQQVVK
NLRFMILMDGVHPEMDTCIIVEYKGHKILNIVDCTRPNGGRLPMKVALMMSDFAGGASGFPMTFSGGKFTEEWKA
QFIKTERKKLLNYKARLVKNLQPRIYCPFAGYFVESHPSDKYIKETNTKNDPNELNNLIKKNSDVITWTPRPGAT
LDLGRMLKDRTDSKGIIEPPEGTKIYKDSWDFEYPYLEILNAALGDEIFLHSSWIKEYFTWAGFKDYNLVVRMIET
DEDFNPFPGGYDYLVDLFLDLSFPKERPQREHPYEEIHSRVDVIRHVVKNGLLWDELYIGFQTRLQRDPDIYHHLF
WNHFQIKLPLTPPNWKSFLMCCEQNGPAILQECKTT

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FIGURE 708

CCGGGGGGCATGAGGGTCCGAGACTTGTTCTTCTGTCCCTTCCAAGACCCGGCGACAGGAGGCATGAGGGGCCCC
CGGCCGAAATGACAGTGCTGGCGCCAGCCTGGAGCCCAACAACCTATCTCCTCCTGCTGCTGCTGCTGAGCTCGG
GACTCAGTGGGACCCAGGACTGCTCCTTCCAACACAGCCCCATCTCCTCCGACTTCGCTGTCAAAATCCGTGAGC
TGTCTGACTACCTGCTTCAAGATTACCCAGTCACCGTGGCCTCCAACCTGCAGGACGAGGAGCTCTGCGGGGGCC
TCTGGCGGCTGGTCCTGGCACAGCGCTGGATGGAGCGGCTCAAGACTGTCGCTGGGTCCAAGATGCAAGGCTTGC
TGGAGCGCGTGAACACGGAGATACACTTTGTACCAAATGTGCCTTTCAGCCCCCCCCCAGCTGTCTTCGCTTCG
TCCAGACCAACATCTCCCGCCTCCTGCAGGAGACCTCCGAGCAGCTGGTGGCGCTGAAGCCCTGGATCACTCGCC
AGAACTTCTCCCGGTGCCTGGAGCTGCAGTGTGAGCCGACTCCTCAACCCTGCCACCCCCATGGAGTCCCCGGC
CCCTGGAGGCCACAGCCCCGACAGCCCCGAGCCCCCTCTGCTCCTCCTACTGCTGCTGCCCGTGGGCCTCCTGC
TGCTGGCCGCTGCCTGGTGCCTGCACTGGCAGAGGACGCGGCGGAGGACACCCCGCCCTGGGGAGCAGGTGCCCC
CCGTCCCCAGTCCCCAGGACCTGCTGCTTGTGGAGCACTTGACTGGCCAAGGCCTCATCCTGCGGAGCCTTAAAC
AACGCAGTGAGACAGACATCTATCATCCCATTTTACAGGGGAGGATACTGAGGCACACAGAGGGGAGTCACCAGC
CAGAGGATGTATAGCCTGGACACAGAGGAAGTTGGCTAGAGGCCGGTCCCTTCCTTGGGCCCCCTCTCATTCCCTC
CCCAGAATGGAGGCAACGCCAGAATCCAGCACCGGCCCCATTTACCCAACCTCTGAACAAAGCCCTTGCCCCCATG
AAATTGTTTATAAATCATCCTTTTCTCCCA

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FIGURE 709

MTVLAPAWSPTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTVASNLQDEELCGGLWR
LVLAQRWMERLKTVAGSKMQGLLERVNTIEHFVTKCAFQPPPSCLRFVQTNISRLLQETSEQLVALKPWITRQNF
SRCLELQCQPDSSTLPPPWSRPLEATAPTAPQPPLLLLLLLPVGLLLLAAAWCLHWQTRRRTPRPGEQVPPVP
SPQDLLLVEH

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FIGURE 710

GCGCCTGGCCTATTGAAGGTTTTTAATCTTCAGAGTTTCGACTTTATCAACAACACTTAGAAGCCACCAAAGAAT
TGCAGATGGATCCTAATAGAATATCAGAAGATGGCACTCACTGCATTTATAGAATTTTGAGACTCCATGAAAATG
CAGATTTTCAAGACACAACCTCTGGAGAGTCAAGATACAAAATTAATACCTGATTCATGTAGGAGAATTAAACAGG
CCTTTCAAGGAGCTGTGCAAAAGGAATTACAACATATCGTTGGATCACAGCACATCAGAGCAGAGAAAGCGATGG
TGGATGGCTCATGGTTAGATCTGGCCAAGAGGAGCAAGCTTGAAGCTCAGCCTTTTGCTCATCTCACTATTAATG
CCACCGACATCCCATCTGGTTCCCATAAAGTGAGTCTGTCTCTTGGTACCATGATCGGGGTGGGCCAAGATCT
CCAACATGACTTTTAGCAATGGAAAACATAAGTTAATCAGGATGGCTTTTATTACCTGTATGCCAACATTTGCT
TTCGACATCATGAACTTCAGGAGACCTAGCTACAGAGTATCTTCAACTAATGGTGTACGTCCTAAACCAGCA
TCAAAATCCCAAGTTCTCATACCTGATGAAAGGAGGAAGCACCAAGTATTGGTCAGGGAATTCTGAATTCATT
TTTATTCCATAAACGTTGGTGGATTTTTTAAGTTACGGTCTGGAGAGGAAATCAGCATCGAGGTCTCCAACCCCT
CCTTACTGGATCCGGATCAGGATGCAACATACTTTGGGGCTTTTAAAGTTTCGAGATATAGATTGAGCCCCAGTTT
TTGGAGTGTTATGTATTTCTGGATGTTTGGAAACATTTTTTAAAACAAGCCAAGAAAGATGTATATAGGTGTGT
GAGACTACTAAGAGGCATGGCCCCAACGGTACACGACTCAGTATCCATGCTCTTGACCTGTAGAGAACACGCGT
ATTTACAGCCAGTGGGAGATGTTAGACTCATGGTGTGTTACACAATGGTTTTTAAATTTTGTAAATGAATTCCTAG
AATTAACAGATTGGAGCAATTACGGGTTGACCTTATGAGAACTGCATGTGGGCTATGGGAGGGGTTGGTCCC
TGGTCATGTGCCCCCTTCGCAGCTGAAGTGGAGAGGGTGTCTATCTAGCGCAATTGAAGGATCATCTGAAGGGGCAA
ATTCTTTTGAATTGTTACATCATGCTGGAACCTGCAAAAAATACTTTTTCTAATGAGGAGAGAAAATATATGTAT
TTTTATATAATATCTAAAGTTATATTTTCAGATGTAATGTTTTCTTTGCAAAGTATTGTAAATTATATTTGTGCTA
TAGTATTTGATTCAAAATATTTAAAAATGTCTTGCTGTTGACATATTTAATGTTTTAAATGTACAGACATATTTA
ACTGGTGCACTTTGTAATTTCCCTGGGGAAAACCTTGCAAGCTAAGGAGGGGAAAAAAATGTTGTTTCCTAATATCA
AATGCAGTATATTTCTTCGTTCTTTTTAAGTTAATAGATTTTTTCAGACTTGTCAAGCCTGTGCAAAAAAATTAA
AATGGATGCCTTGAATAATAAGCAGGATGTTGGCCACCAGGTGCCTTTCAAATTTAGAACTAATTGACTTTAGA
AAGCTGACATTGCCAAAAAGGATACATAATGGGCCACTGAAATCTGTCAAGAGTAGTTATATAATTGTTGAACAG
GTGTTTTTCCACAAGTGCCGCAAATTGTACCTTTTTTGTGTTTTTCAAATAGAAAAGTTATTAGTGGTTTTATCAG
CAAAAAAGTCCAATTTAATTTAGTAAATGTTATCTTATACTGTACAATAAAAACATTGCCTTTGAATGTTAATT
TTTTGGTACAAAAATAAATTTATATGAAAACCTGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 711

MDPNRISEDGTHCIYRILRLHENADFQDTTLESQDTKLIPDSCRRIKQAFQGAVQKELQHIVGSQHIRAEKAMVD
GSWLDLAKRSKLEAQPF AHL TINATDIPSGSHKVSLSWYHDRGWAKISNMTFSNGKLIVNQDGFYYLYANICFR
HHETSGDLATEYLQLMVYVTKTSIKIPSSHTLMKGGSTKYWSGNSEFHFYSINVGGFFKLRSGEESISIEVSNPSL
LDPDQDATYFGAFKVRDID

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FIGURE 712

CTGGGGGTCCGTTCCCCAACTTCCTCGGCGCTCCGGACTCCCAAGTCTCCGCCGGACCTCCTTTGGATATTCCCT
CGTGTCTCCGATTCTGAGAGAGGGGGGAAGACGGTGGGGCCTCCCCACCTGCCCCGCAGAAAGATGCAGTTCTTTGG
CCGCCTGGTCAATACCTTCAGTGGCGTCACCAACTTGTTCTCTAACCATTCCGGGTGAAGGAGGTGGCTGTGGC
CGACTACACCTCGAGTGACCGAGTTTCGGGAGGAAGGGCAGCTGATTCTGTTCCAGAACACTCCCAACCGCACCTG
GGACTGCGTCTGGTCAACCCCCAGGAACTCACAGAGTGGATTCCGACTCTTCCAGCTGGAGTTGGAGGCTGACGC
CCTAGTGAATTTCCATCAGTATTCTTCCCAGCTGCTACCCCTTCTATGAGAGCTCCCCCTCAGGTCTGCACACTGA
GGTCTGTCAGCACCTGACCGACCTCATCCGTAACCACCCAGCTGGTCAGTGGCCCCACCTGGCTGTGGAGCTAGG
GATCCGCGAGTGCTTCCATCACAGCCGTATCATCAGCTGTGCCAATTGCGCGGAGAACGAGGAGGGCTGCACACC
CCTGCACCTGGCCTGCCGCAAGGGTGATGGGGAGATCCTGGTGGAGCTGGTGCAGTACTGCCACACTCAGATGGA
TGTACCGACTACAAGGGAGAGACCGTCTTCCATTATGCTGTCCAGGGTGACAATTCTCAGGTGCTGCAGCTCCT
TGGAAGGAACGCAGTGGCTGGCCTGAACCAGGTGAATAACCAAGGGCTGACCCCGCTGCACCTGGCCTGCCAGCT
GGGGAAGCAGGAGATGGTCCGCGTGCTGCTGTGCAATGCTCGGTGCAACATCATGGGCCCCAACGGCTACCC
CATCCACTCGGCCATGAAGTTCTCTCAGAAGGGGTGTGCGGAGATGATCATCAGCATGGACAGCAGCCAGATCCA
CAGCAAAGACCCCCGTTACGGAGCCAGCCCCCTCCACTGGGCCAAGAACGCAGAGATGGCCCGCATGCTGTGTA
ACGGGGCTGCAACGTGAACAGCACCAGCTCCGCGGGGAACACGGCCCTGCACGTGGCGGTGATGCGCAACCGCTT
CGACTGTGCCATAGTGCTGCTGACCCACGGGGCCAACGCGGATGCCGCGGAGAGCACGGCAACACCCCGCTGCA
CCTGGCCATGTGAAAGACAACGTGGAGATGATCAAGGCCCTCATCGTGTTCGGAGCAGAAGTGGACACCCCGAA
TGACTTTGGGGAGACTCCTACATTCCTAGCCTCCAAAATCGGCAGACTTGTACCAGGAAGGCGATCTTGACTCT
GCTGAGAACCGTGGGGGCCGAATACTGCTTCCCACCCATCCACGGGGTCCCCGCGGAGCAGGGCTCTGCAGCGCC
ACATCATCCCTTCTCCCTGGAAAGAGCTCAGCCCCACCGATCAGCCTAAACAACCTAGAACTACAGGATCTCAT
GCACATCTCACGGGCCCCGGAAGCCAGCGTTTCATCTGGGCTCCATGAGGGACGAGAAGCGGACCCACGACCACCT
GCTGTGCTGGATGGAGGAGGAGTGAAGGCCTCATCATCATCCAGCTCCTCATCGCCATCGAGAAGGCCTCGGG
TGTGGCCACCAAGGACCTGTTTGACTGGGTGGCGGGCACCAGCACTGGAGGCATCCTGGCCCTGGCCATTCTGCA
CAGTAAGTCCATGGCCTACATGCGCGGCATGTACTTTTCGCATGAAGGATGAGGTGTTCCGGGGCTCCAGGCCCTA
CGAGTCGGGGCCCCCTGGAGGAGTTCTTGAAGCGGGAGTTTGGGGAGCACACCAAGATGACGGACGTGAGGAAACC
CAAGGTGATGCTGCAGGGACACTGTCTGACCGGCAGCCGGCTGAAGTCCACCTCTTCCGGAACCTACGATGCTCC
AGAAACTGTCCGGGAGCCTCGTTTCAACCAGAACGTTAACCTCAGGCCTCCAGCTCAGCCCTCAGACCAGCTGGT
GTGGCGGGCGGGCCGAAGCAGCGGGGCAGCTCCTACTTACTTCCGACCCAATGGGCGCTTCTTGACGGTGGGCT
GCTGGCCAACAACCCCCACGCTGGATGCCATGACCGAGATCCATGAGTACAATCAGGACCTGATCCGCAAGGGTCA
GGCCAACAAGGTGAAGAACTCTCCATCGTTGTCTCCCTGGGGACAGGGAGGTCCCCACAAGTGCTGTGACCTG
TGTGGATGTCTTCCGTCCCAGCAACCCCTGGGAGCTGGCCAAGACTGTTTTTGGGGCCAAGGAACTGGGCAAGAT
GGTGGTGGACTGTTGCACGGATCCAGACGGGCGGGCTGTGGACCGGGCACGGGCTGGTGCGAGATGGTCGGCAT
CCAGTACTTCAGATTGAACCCCCAGCTGGGGACGGACATCATGCTGGATGAGGTGAGTGCACAGTGTGGTCAA
CGCCCTCTGGGAGACCGAGGTCTACATCTATGAGCACC GCGAGGAGTTCCAGAAGCTCATCCACCTGCTGCTCTC
ACCCTGAGGGTCCCCAGCCTCTCACCGGCCCCAGCTGACCTCGTCCATTTCAGCCCTGCCAGGCCAAGCCAGCC
ACTGCCCTCCCGGGCAGATCTGGGCCCAGGCACCTCTGAGTCCATAGACCAGGCCTGGGAGAAAGCCAAGCTGCC
TGCCCGAGGCTGGTCTTGAAGGCCTGTCTCCACTAACCCCCCTTCCATCACTTTCTGTTCATGCCAGGXTGGGA
AAGTCTAGAGCCCCCTTTGGCCCCCTTCCCTGACTGTCAAGGACAACCTGACTCCCCCATCAGCTCAAACATTAAG
GGTACCCGGGCACAACCGTACCCGTGCCCCAGCCCCAGCCTACCCCTGAGGGCCTGCCGGGCTGCCTTTGCCCCA
GCCCCAGCAAGGGCATTCCAGGCTTCCCTGGTGGGTGCAGCCCAATCCCTCTGCCCTCTGCTCCGTTCCCTGGG
GGCTGGGACTAAAGAAATGGGTGTCCCCACCCCATCAGCTGGGAAAGCCCAGGCCGAGGAGTGGGATGCCCGT
TGGACTTTGCCCTCACACTGGCCCAGCCCCCTCACACTGCCCCACCCGAGAACCCCTCAGCTCTCAAAGGTCACT
CCTGGGAGTTTCTTCTTCCCAATGGAAGTGGCTTAAGAGCCAAACTGAAATAAATCATTTGGATTCAAGTTCAA
AAAAAAAAAAAAAA

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FIGURE 713

MQFFGRLVNTFSGVTNLFSPFRVKEVAVADYTSSDRVREEGQLILFQNTPNRTWDCVLVNPRNSQSGFRLFQLE
LEADALVNFHQYSSQLLPFYESSPQVLHTEVLQHLTDLIRNHPSWSVAHLAVELGIRECFHHSRIISCANCAENE
EGCTPLHLACRKGDGEILVELVQYCHTQMDVTDYKGETVFHYAVQGDNSQVLQLLGRNAVAGLNQVNNQGLTPLH
LACQLGKQEMVRVLLLCNARNIMGPNGYPIHSAMKFSQKGCAEMIISMDSSQIHSKDPYRGASPLHWAKNAEMA
RMLLKRGCVNSTSSAGNTALHVAVMRNRFDCAIVLLTHGANADARGEHGNTPLHLAMSKDNVEMIKALIVFGAE
VDTPNDFGETPTFLASKIGRLVTRKAILTLLRTVGAEYCFPIHGVPAEQGSAAPHHPFSLERAQPPPISLNNLE
LQDLMHISRARKPAFILGSMRDEKRTHDHLCLDGGGVKGLIIIIQLLIAIEKASGVATKDLFDWVAGTSTGGILA
LAILHKSMAVMRGMYFRMKDEVFRGSRPYESGPLEEFLKREFGEHTKMTDVRKPKVMLTGTLSDRQPAELHLFR
NYDAPETVREPRFNQNVNLRPPAQPSDQLVWRAARSSGAAPTYFRPNGRFLDGGLLANNPTILDAMTEIHEYNOQL
IRKGQANKVKKLSIVVSLGTGRSPQVPVTCVDVFRPSNPWELAKTVFGAKELGKMVVDCCCTDPDGRAVDRARAWC
EMVGIIQYFRLNPQLGTDIMLDEVSDTVLVNALWETEVYIYEHREEFQKLIHLLLSP

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FIGURE 714

TAAAACTTTAGGAAATTAGTACCAGACTTTTATATTGGTCAACAGCAAATGAACATTACTACTCAGCCTCCAAC
ACATGCAGTTTGCCTATACCAGGGATCCTGTCAAAATATACACCACTTATAGCTTCTTAAGTGCAGTTATCATAG
AGCACAGTCCCTGACATCACACAGCTGCAGAGATGAATAAAACAAAGAGGAACCTACTCAGAAGTGAGTCTGGCCC
AGGACCCAAAGAGGCAGCAAAGGAACTTAAGGGCAATAAAATCTCCATTTCAGGAACCAAACAGGAAATATTCC
AAGTAGAATTAAACCTTCAAATGCTTCTTCGGATCATCAAGGGAATGACAAGACATATCACTGCAAAGGTTTAC
TGCCACCTCCAGAGAAGCTCACTGCTGAGGTCCTAGGAATCATTGTCATTGTCCTGATGGCCACTGTGTTAAAAA
CAATAGTTCTTATTCTTGTATTGGAGTACTGGAGCAGAAACAATTTTTCCCTGAATAGAAGAATGCAGAAAGCAC
GTCATTGTGGCCATTGTCCTGAGGAGTGGATTACATATTCCAACAGTTGTTATTACATTGGTAAGGAAAGAAGAA
CTTGGGAAGAAAGAGTTTGCTGGCCTGTGCTTCGAAGAACTCTGATCTGCTTTCTATAGATAATGAGGAAGAAAT
GGTAAGACGTAAATGTTTCAACACTTTACTAAAAGCTTATTTCTGTCAATATCATATTTGTAGAAATCATCCATA
TGTTTATACATATATTTACTTCATATATTTTAAAGTCTGTGTAGTATTCAACTGACTTCATAATATTTTATATT
CATATACTGTTAATGCACATTTGGTTATTTCCAGTTTGTCTTTTCATGGAAACCCATGCTTCTATAAATGTTTTT
ATCACAAAATAAATATAAAGAAACTAAAAAAAACCAAAAAAAAAAAAAAAAAAAGGCGGCCGCGATATAG

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FIGURE 715

MNKQRGTYSEVSLAQDPKRQQRKLKGNKISISGTKQEIQVELNLQNASSDHQGNDKTYHCKGLLPPEKLTAEV
LGIICIVLMATVLKTIVLIPCIGVLEQNNFSLNRRMQKARHCGHCPEEWITYSNSCYIIGKERRTWEERVCFV
RRTLICFL

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FIGURE 716

GAATTCGATTTTTGAGACTTCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGCTGC
CTGCCTTCTTGCCATGTCTAACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCGCACCAAA
AGCACCTCAAAGAAGGAAAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCTTAGCAAGGTTCAAAGGCCGA
TGGTGTAAATATAAGGCCAAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGA
CTCTATGATGAACTAAAGGGAATGGCGGCAGCTGGTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAA
CATTTCCCTTTCTGGGATAAAAAATAATTGATGAGAAAACCTGGGGTAATAGAGCATGAACATCCAGTAAATAAGAT
TTCTTTTCATTGCCCGTGATGTGACAGACAACCGGGCATTGGTTACGTGTGTGGAGGAGAAGGCCAGCATCAGTT
TTTTGCCATAAAACCGGGCAACAGGCTGAACCATTAGTTGTTGATCTTAAAGACCTTTTTCAAGTTATCTATAA
TGTAAGAAAAAGGAAGAAGAAAAAGATAAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCT
AATGATTCTAGATGACCAAACTAACAACTGAAATCGGAAAGCAAAGATATCCTGTTAGTGATCTAACTCTGA
AATCGACACCAATCAGAATTCCTTAAGAGAAAATCCATTCTTAACAAACGGCATCACCTCCTGTTCTCTTCCTCG
ACCAACGCCTCAGGCATCCTTCTTGCTGAAAATGCCTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCC
TGATCCTTTCCGTGACGATCCTTTCACACAGCCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCC
AGATCAGAAGAAAGAGAATTCGAGTAGCTCGTCTACTCCGTGAGTAATGGGCCCCCTGAATGGTGATGTTGACTA
CTTTGGTCAGCAATTTGACCAGATCTCTAACCGGACTGGCAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTC
AAGTTCGCAAACCCAGCCAGCAGTGAGAACTCAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAA
ATCCTCCCCGAACCTTTTGTGGGAAGCCCTCCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGA
AAGCTCTGTCCAGTCTCACCACATGACTCCATAGCCATTATCCCACCTCCACAAAGTACCAAACCAGGAAGAGG
CAGAAGGACTGCTAAGTCTTCAGCCAATGACTTGCTTGCATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTC
AGGCCAGGCGTCACCCACAGGACAACCTACAGCCCTGCAGCCCAACCTCTGGATCTCTTCAAACAAGTGCTCC
TGCCCCAGTGGGGCCCCAGGTGGGTCTAGGTGGTGTAACTGTCACTTCTCAGGCAGGACCATGGAACACAGC
ATCTTTGGTCTTCAATCAGTCCCCCTCAATGGCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCA
GCCCCGTCATTTTGGTACAAGTCCAGCTGTTTCAGGTTGGAACCAGCCTTCACCCCTTGACGCTCAACTCCCCC
TCCAGTGCCTGTTGTCTGGGGCCCTTCTGCATCTGTGGCACCAATGCTTGGTCAACAACAAGCCCTTTGGGGAA
TCCTTTTCAGAGCAATATTTTTCCAGCTCCTGCTGTGTCCACTCAGCCCCCATCCATGCATCCTCTCTCCTGGT
CACTCCTCCTCAGCCACCTCCCAGAGCTGGCCCTCCCAAGGACATCTCCAGTGATGCCTTCACTGCCTTAGACCC
ACTTGGGGATAAAGAGATCAAGGATGTGAAAGAAATGTTTAAAGGATTTCCAACCTGCGGCAGCCACCTGCTGTGCC
CGCGCGGAAGGGAGAGCAGACTTCTTCTGGGACTTTGAGTGCCCTTGCCAGTTATTTCAACAGCAAGGTTGGCAT
TCCTCAGGAGAATGCAGACCATGATGACTTTGATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAAGCC
AGCTCCCAGACAAGTTTCCCTGCCAGTTACCAAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCT
TTTTGGTTCAACAAAGCCTCTGTGGCTTCTTCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAA
TCCTTTTGCCATAAATTCTGAACTTGGTCTGCAGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAA
CAAAGCTGATAGCCAGACACGTTCTGATTTCTGCCCTTGTTCCAGCTTTGACGTATTATCTGTTGCCTTATTTCT
CATTGCCTCTTCTACTTGTAATGCTTTTCACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAA
TAAATTAAGATCCTAACTCTCTAGCTTAAGTGTAATGAAGTACAGTAGTTTCCCTACTGAACCCTGCCTCTTG
TGTCCCTGGAACCTTCTAGAACACCTGCCTTCTACCCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATC
ATACTGTTTTGAATAAATTTCAAATCCTTAAAAA

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FIGURE 717

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDDVPDARGDKMSQDSMMK
LKGMAAAGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFAIK
TGQQAEPPLVVDLKDLEFQVIYNVKKKEEEKKIEEASKAVENGSEALMILDDQTNKLKSESKDILLVDLNSIDTN
QNSLRENPFLLTNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDPFRDDPFTQPDQSTPSSFDLSPDQKK
ENSSSSSTPLSNGPLNGDVDFYFGQQFDQISNRTGKQEAQAGPWPFSSSQTPAVRTQNGVSEREQNGFSVKSSPN
PFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRGRRTAKSSANDLLASDIFAPPVSEPSGQAS
PTGQPTALQPNPLDLFKTSAPAPVGPQVGLGGVTITLPQAGPWNTASLVFNQSPSMAPGAMMGQPSGFSQPVIF
GTSPAVSGWNQPSPFPAASTPPPVVWGPSASVAPNAWSTTSPLGNPFQSNIFPAPAVSTQPPSMHSSLLVTPPQ
PPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTSSGTLFAFASYFNKVGIPQEN
ADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASVASSQPVSSSEMYRDPFGNPFA

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FIGURE 718

GTCGCGCCATTTTGCCGGGGTTTGAATGTGAGGCGGAGCGGCGGAGCGGATAGTGCCAGCTACGGTCCGCG
GCTGGGGTTCCCTCCTCCGTTTCTGTATCCCCACGAGATCCTATAGCAATGGAACTCAGCGATGCAAATCTGCAA
ACACTAACAGAATATTTAAAGAAAACACTTGATCCTGATCCTGCCATCCGACGTCCAGCTGAGAAATTTCTTGAA
TCTGTTGAAGGAAATCAGAATTATCCACTGTTGCTTTTGACATTACTGGAGAAGTCCCAGGATAATGTTATCAAA
GTATGTGCTTCAGTAACATTCAAAAACCTATATTTAAAGGAACTGGAGAATTGTTGAAGATGAACCAACAAAATT
TGTGAAGCCGATCGAGTGGCCATTAAAGCCAACATAGTGCACCTTGATGCTTAGCAGCCCAGAGCAAATTCAGAAG
CAGTTAAGTGATGCAATTAGCATTATTGGCAGAGAAGATTTCCACAGAAATGGCCTGACTTGCTGACAGAAATG
GTGAATCGCTTTAGAGTGGAGATTTCCATGTTATTAATGGAGTCCCTCCGTACAGCACATTATTATTTAAAGA
TACCGTCATGAATTTAAGTCAAACGAGTTATGGACTGAAATTAAGCTTGTTCTGGATGCCTTTGCTTTGCCTTTG
ACTAATCTTTTTAAGGCCACTATTGAACTCTGCAGTACCCATGCAAATGATGCCTCTGCCCTGAGGATTCTGTTT
TCTTCCCTGATCCTGATCTCAAAATTTGTTCTATAGTTTAACTTTAGGATCTCCCTGAATTTGGGAAGGTAAT
ATGGAACTTGGATGAATAATTTCCATACTCTCTTAACATTGGATAATAAGCTTTTACAACTGATGATGAAGAG
GAAGCCGGCTTATTGGAGCTCTTAAATCCAGATTTGTGATAATGCCGCACTCTATGCACAAAAGTACGATGAA
GAATTCAGCGATACCTGCCTCGTTTTGTTACAGCCATCTGGAATTTACTAGTTACAACGGGTCAAGAGGTTAA
TATGATTTGTTGGTAAGTAATGCAATTCATTTCTGGCTTCAGTTTGTGAGAGACCTCATTATAAGAATCTATTT
GAGGACCAGAACACGCTGACAAGTATCTGTGAAAAGGTTATTGTGCCTAACATGGAATTTAGAGCTGCTGATGAA
GAAGCATTTGAAGATAATTTCTGAGGAGTACATAAGGAGAGATTTGGAAGGATCTGATATTGATACTAGACGCAGG
GCTGCTTGTGATCTGGTACGAGGATTATGCAAGTTTTTTGAGGGACCTGTGACAGGAATCTTCTCTGGTTATGTT
AATTCCATGCTGCAGGAATACGCAAAAAATCCATCTGTCAACTGGAAACACAAAGATGCAGCCATCTACCTAGTG
ACATCTTTGGCATCAAAAGCCCCAAACACAGAAGCATGGAATTACACAAGCAAATGAACTTGTAACCTAACTGAG
TTCTTTGTGAATCACAATCCTCCCTGATTTAAATCAGCTAATGTGAATGAATTTCCCTGTCTTAAAGCTGACGGT
ATCAATATATTATGATTTTTAGAAATCAAGTGCCAAAGAACATCTTTAGTCTCGATTCCCTCTCTTGATTAAT
CATCTTCAAGCTGGAAGTATTGTTGTTTCATACTTACGCAGCTCATGCTCTTGAACGGCTCTTTACTATGCGAGGG
CCTAACAAATGCCACTCTCTTTACAGCTGCAGAAATCGCACCGTTTGTGAGATTCTGCTAACAAACCTTTTCAA
GCTCTCACACTTCCTGGCTCTTCAGAAAATGAATATATTATGAAAGCTATCATGAGAAGTTTTTCTCTCTACAA
GAAGCCATAATCCCCTACATCCCTACTCTCATCACTCAGCTTACACAGAAGCTATTAGCTGTTAGTAAGAACCCA
AGCAAACCTCACTTTAATCACTACATGTTTGAAGCAATATGTTTATCCATAAGAATAACTTGCAAAGCTAACCCCT
GCTGCTGTTGTAAATTTTGAAGGAGCTTTGTTTTTGGTGTCTTACTGAAATCTTACAAAATGATGTGCAAGAATTT
ATTCCATACGTCTTTCAAGTGATGTCTTTGCTTCTGGAAACACACAAAAATGACATCCCGTCTTCTATATGGCC
TTATTTCTCATCTCCTTCAGCCAGTGCTTTGGGAAAGAACAGGAAATATTCTGTCTAGTGAGGCTTCTTCAA
GCATTCTTAGAACGCGGTTCAAACACAATAGCAAGTGCTGCAGCTGACAAAATTCCTGGGTACTAGGTGTCTTT
CAGAAGCTGATTGCATCCAAAGCAAATGACCACCAAGGTTTTTATCTTCTAAACAGTATAATAGAGCACATGCCT
CCTGAATCAGTTGACCAATATAGGAAACAAATCTTCATTCTGCTATTCCAGAGACTTCAGAATTCAAAACAACC
AAGTTTATCAAGAGTTTTTTAGTCTTTATTAATTTGTATTGCATAAAATATGGGGCACTAGCACTACAAGAAATA
TTTGATGGTATACAACCAAAAATGTTTGGAAATGGTTTTTGGAAAAAATTATTTATTCCTGAAATTCAGAAGGTATCT
GGAAATGTAGAGAAAAAGATCTGTGCGGTTGGCATAACCAACTTACTAACAGAATGTCCCCCAATGATGGACACT
GAGTATACCAAACCTGTGGACTCCATTATTACAGTCTTTGATTGGTCTTTTTGAGTTACCCGAAGATGATACCATT
CCTGATGAGGAACATTTTATTGACATAGAAGATACACCAGGATATCAGACTGCCTTCTCACAGTTGGCATTGCT
GGGAAAAAAGAGCATGATCCTGTAGGTCAAATGGTGAATAACCCCCAAAATTCACCTGGCACAGTCACTTCACATG
TTGTCTACCGCTGTCCAGGAAGGGTCCATCAATGGTGAGCACCAGCCTGAATGCAGAAGCGCTCCAGTATCTC
CAAGGGTACCTTCAGGCAGCCAGTGTGACACTGCTTTAAACTGCATTTTTCTAATGGGCTAAACCCAGATGGTTT
CCTAGGAAATCACAGGCTTCTGAGCACAGCTGCATTAAACAAAGGAAGTTTTCTTTTTGAACTTGTCACGA

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FIGURE 719

MELSDANLQTLTEYLKKTLDPDPAIRRPAAEKFLESVEGNQNYPLLLLTLLEKSQDNVIKVCASVTFKNIYIKRNWR
IVEDEPNKICEADRVAIKANIVHMLSSPEQIQKQLSDAISIIIGREDFPQKWPDLLEMTVNRFQSGDFHVINQVL
RTAHSLEFKRYRHEFKSNELWTEIKLVLDALPLTNLFKATIELCSTHANDASALRILFSSLILISKLFYSLNFQ
DLPEFWEGNMETWMNNFHTLLTLDNKLQTDDEEEAGLLELLKSQICDNAALYAQKYDEEFQRYLPRFVTAIWNL
LVTTGQEVKYDLLVSNAIQFLASVCERPHYKNLFEDQNTLTSICEKVIVPNMEFRAADEEAFEDNSEEYIRRDLE
GSDIDTRRRRAACDLVRGLCKFFEGPVTGIFSGYVNSMLQEYAKNP SVNWKHKDAAIYLVTSLSKAQTQKHGITO
ANELVNLTFFVNHILPDLKSANVNEFPVLKADGIKYIMIFRNQVPKEHLLVSIPLLINHLQAGSIVVHTYAHA
LERLFTMRGPNNATLFTAAEIAPFVEILLTNLFKALTLPGSSENEYIMKAIMRSFSLQEAIPYIPTLIITQLTQ
KLLAVSKNPSKPHFNHYMFEAICLSIRITCKANPAAVNFEALFLVFTEILQNDVQEFIPYVFQVMSLLLETHK
NDIPSSYMALEPPLLQPVLEWERTGNIPALVRLQAFLEGRSNTIASAAADKIPGLLGVFQKLIASKANDHQGFYL
LNSIIIEHMPPEVDQYRKQIFILLFQRLQNSKTTKFIKSFLVFINLYCIKYGALALQEIFDGIQPKMFGMVLEKI
IIPYIQKVSNGVEKKICAVGITNLLTECPMMDTEYTKLWTPLLQSLIGLFELPEDDTIPDEEHFIDIEDTPGYQ
TAFSQLAFAGKKEHDPVGMVNNPKIHQAQSLHMLSTACPRVPSMVSTSLNAEALQYLQGYLQAASVTLL

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FIGURE 720A

CCGTCCCGGGGCGGACGGGCGCGGGCGGGAGGATGGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGT
ACCTGGAGCGCAGGGATCGAGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGG
AGAAAACAAAGGCGGCCGGCCTGGTGC GCAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACA
GACGAGCCAAACTCAGGCTGTACCTTGAGCAGCTCAAGCAACTGGTGGCCCTGGGCCCCGACAGCACCCGCCACA
CCACGCTGAGCCTCCTGAAGCGGGCCAAGGTGCACATCAAGAACTGGAGGAGCAGGACCGCCGGGCACTGAGCA
TCAAGGAGCAGCTGCAGCAGGAGCATCGTTTCCTGAAGCGGCGCCTGGAGCAGCTGTCGGTGCAGAGCGTGGAGC
GCGTGC G CACAGATAGCACGGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGG
AGTTTGGCCCTGGTGGAGCTGGACAGTGTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCA
CCGGCGGCGACAGTGGCTTCGGGCCCCACTGCCGGCGGCTGGGCGCCCCGCCCTCTCGTAGGCCCCGTGCCCTCT
GCTCCTTGGCCTGCCTGCCGCCAGCCACGCGTGTGAGCCCTCCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCA
CAGGCCCCACTGCTGTGCCATTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGG
GCCTGCCGAGCTGCCTGCCCTTCCAGCTGGGCAGAGTCCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCCGG
AGCCCTGGTCAGCATAGCCGCCCCACGGTCTGTTCTCAGATTCCCTAATCATTCCAGAAGTATTAAACGTCATTGCT
GCAAACCTCGGCAGGTGCCGTGTGAGGGCTTAATGACCACCACAGGGAGCTCAGACCCCAACCTGGATCCCAG
GAGAAAGGAGTGGACCGAGGAAGGAAGGAAGGCAAGGCTGTCTGTCCATCCGTCCGTCTGTCCACCTACCTGTCA
GTCCACATAGGCTCCTGGCGTGGACAAGGGGTCTGTGAAGGGCGGGAAGTGGGTGAGCACCTGGGGCAGGTGGGT
GGTTAAGGTCCTTCCCCTTCGAGGTGTGAGAACCTAGGGCTGGGCTCTCGGGGCCAGGCAGGCCAGCCCAGCC
CACGCCGAGCTGGGCAGCGTCTGCTCTGGTAGGACTGTGAGACGCACACGCGCACGCACCTAGACACACCCACTC
ATGTACATGCTCACACATGCAGACACACCTGGGCGTCCCAGGTACATGTTCTGGGGATGATGGCCTTCAGGGG
TCATCTGGCAAACAGCCCCTGGGCTGTGCTGGATCCCCCTCTAGCTCCTGCTCAGCCAGCCCCACCCAGTAGTC
CTGCCTGTCTGCACAGGAGAGGGGCTTCTCTTCTGGCTGGGGCTGGGGTGAAGTGGAGGCTGGTTAAGTTGCAG
CCGCTGGGTCCCTCGGGGGCTTACTCATCTCCCTTTTTTAAACAAAAAGCAAAAAAGTAAATGCTGCACTGCCCA
GCAGCCCGGTTAGGGCTCCTGGAGCCACCTTAGGAAAGGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CAGAGAGGCTTTCCAGAAAAAAGGCAACCTTTTAAAAAGAAAGCCTAAAGACTCTCGGCCCTAGGGA
CGTCCGTGTGTGCCGCTCTGTTTCTGTACCAGATTTTGTATTCTATTTTCTAGCTGTTGTTGCGTCCCTGT
TTGCTGAGGGGTGGGAGCCACCCAGCGTCTCAGGGACCTGTCCCTCCGTACGTCGTCAAAGTGTGCCTTGTGTC
TTGTGTGAGGCCTTGCCCTTCCCACAGCATGTCCCTCGTGGCTCAGGGTGGCCAGGCCTGCCAGCTAGTGCT
GTCCTCCCATCTCCTGTGGGCAGCCCCCTCCCGGCAGCCAGGGCTTCTGGAGGCGATGCAGCCAGGCCCTGTGG
GTGGCACGGAGGGGCTGTGACCTGGTCCCCAGTGTGCCCCCTCCCACTGGCTGGCAGGGGCTGCTTGTCTACTA
GAGAGATGGATTCTACCTGTACCTGACTCGAGCCCCCTGCTTCTGGCCTAGGCGAGGGTTCCAGGTTTCAGA
CACTGGCAGCCAATGAAGACTGTGCTCGCTGGGTGGTGCAGGCCTGGCACCAGGAGGCTTGACCCGCCCTTCTCT
TCCTGACGTCTCTGTCTTGGGGCTGGCCCATAGCAGTGCCTGCCGTGCCTCTGGTACATCTGTAGCCAAATCC
CATATCATGGGGAATTCGTGTCTATTTTCAGTCGTACGCATAGACGCCCCAGGATGGGGGGCCCACTGTGGCG
GAAGGGGTCCCTGGAAACAACCTTGGCACAGAACCTGCCCTGCAGGCTGTAGGGGGCATGGTGCCTGGAGCTGA
GGGGCATCCGAACGCGTTGCGGGTGGTTGTGAGGAGGCCTGTCTGCATCTCCTTCCGGCCCCACTGGGGTCCAGG
GGTGGCCAGAAAGGAGCTTCCCCTGCTGCCTGAGTCTGTCCCCCAGGCTTCATTTCAAACACCGTGGCACCTC
CGAGCAAGGCGGGCCGTGTGTAAAAGCTTGCTTCCCCAGCCAGCACTGCAGGGCCCTGAGGTGGTCTGTCTCCCTG
CCCTCAATTCTTGAAGCACAGCTCCCTGCCCCACCTCCAGTGCCTGAGGCAGCTAGGGGCTTCTGCTCTCATC
TCTGACCAGCAGAATCCACCCGGTGACCAGTGGTGGCCCCCTCAGCCCACCTCCCGGCAGCTCAGCCTGTGGCTC
TTGAGGCCGTGGTTCCACAGTGGACTGGGAGGCAGTCTCAGCCACCCGGGTGCTGTTTCACTGCTGCCCTCCCTGC
CATCAGCAGGTGGGTGAGGGGTGCCCCTGGGTGGGGGCGCTGCTAGGAGTACCACATGCTCCAACCTCCCA
CTGCTCCCTGTGAGGGGCCCAGGCTGCCATCACTGGAGGCTGCAGGGACCAAGAGGCCATCACCGTGTCTATAGA
GAGCAGACAGAAGCAGAACAGAGCCCCGGGGCTCCTGAGCCTCTGCGTGTGCCCTCCAGCCACACCACTGCTCT
CGGCCACTGAGCACCCAGACTCAGGCTTGGGTCCCCAGCCTTATTGGAAGGCAGCTCCCGCATACCAGGATAAC
CCCCGCAAACCATAGCAGACCCCCGCCATCTCGCAGAGTGGGAGAGGCTGCAGCAAGGCTTTGCCCTCTGCAG
ACCCCATCTTAGTGGCACGGTGTGTTGGGCTGTGTCCCGGGTGGTGGAAACCTGTACCGGTCTGTGGCCCTAGG
GTCCCTGCTCTGTCTGCCCGGCCCGTGTGTCCGCTGGGTGAGGCAGGCTCCCCGTGCCCTGCCCTCCCTCTGT
CAGGGAACCTGGGACCCCCCTCCCCACTGCCTGCACAGAGGACCCTGACCCTCGGCCAGCAGGGTGGCCCCAGGTC

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FIGURE 720B

CATGTTGGGCACTAGGGCAGGTTCCGTGCCAGAGTCGGGGGCCACACGAGGGCCTGGTGCCGGTGAGGGGGGCGT
GCGCTAGAGGGGGAAAGGGGCCCCGGCCACCTGTCCACCGTGTTGGGCCGTGCTGTGTCCTTATGTCATTGTAAT
ATAAATACAGATTTTTATATCTC

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FIGURE 721

MELNSLLILLEAAEYLERRDREAEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRRLYLEQ
LKQLVPLGPDSTRHTTLLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSSDADDHYSLSQSGTGGDSGFGPHCRRLGRPALS

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FIGURE 722

[illegible]

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FIGURE 723

MQQPFNYPYPQIYWVDSSASSPWAPPGTVLPCPTSVPRRPGQRRPPPPPPPPPLPPPPPPPLPPLPLPPLKKRG
NHSTGLCLLVMFFMVLVALVGLGLGMFQLFHLQKELAELESTSQMHTASSLEKQIGHPSPPPEKKELRKVAHLT
GKSNSRSMPLWEDTYGIVLLSGVKYKKGGLVINETGLYFVYSKVYFRGQSCNNLPLSHKVYMRNSKYPQDLVMM
EGKMSYCTTGQMWARSSYLGAFFNLTSADHLYVNVSELSLVNFEESQTFFGLYKL

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FIGURE 724

ACTAAGACCGCAAGGCATTTCATTTCTCTACGGTGGATGCGGACGCCGGGAGGAGAGCCCCAGAGAGAGGA
GCTGGGAGCGGAGGCGCAGGCAATGCTCAGCCCTGGATGTAGCTGAGAGGCTGGGAGAAGAGACGACCGCTGGAG
ACCGAGCGGCGTGGGGAAGACCTAGGGGGGTGGGTGGGGGAAGCAGACAGGAGAACACTCGAAATCAAGCGCTTT
ACAGATTATTTTATTTTGTATAGAGAACACGTAGCGACTCCGAAGATCAGCCCCAATGAACATGTCAGTGTGAC
TTTACAAGAATATGAATTCGAAAAGCAGTTCAACGAGAATGAAGCCATCCAATGGATGCAGGAAAACCTGGAAGAA
ATCTTTCCTGTTTTCTGCTCTGTATGCTGCCTTTATATTCGGTGGTCGGCACCTAATGAATAAACGAGCAAAGTT
TGAAGTGAAGGAAGCCATTAGTGCTCTGGTCTCTGACCCTTGCACTCTTCAGTATATTCGGTGTCTCTCGAACTGG
TGCTTATATGGTGTACATTTTGTATGACCAAGGCCTGAAGCAGTCAGTTTGTGACCAGGGTTTTTACAATGGACC
TGTCAGCAAATTCTGGGCTTATGCATTTGTGCTAAGCAAAGCACCCGAAGTGGAGATACAATATTCATTATTCT
GAGGAAGCAGAAGCTGATCTTCTGCACTGGTATCACCACATCACTGTGCTCCTGTACTCTTGGTACTCCTACAA
AGACATGGTTGCCGGGGGAGGTTGGTTCATGACTATGAACTATGGCGTGCACGCCGTGATGTACTCTTACTATGC
CTTGCGGGCGGCAGGTTTCCGAGTCTCCCGGAAGTTTGCCATGTTTCATCACCTTGTCAGATCACTCAGATGCT
GATGGGCTGTGTGGTTAACTACCTGGTCTTCTGCTGGATGCAGCATGACCAGTGTCACTCTCACTTTTCAAGACAT
CTTCTGGTCTCACTCATGTACCTCAGCTACCTTGTGCTCTTCTGCCATTTCTTCTTTGAGGCCTACATCGGCAA
AATGAGGAAAACAACGAAAGCTGAATAGTGTGGAACTGAGGAGGAAGCCATAGCTCAGGGTCATCAAGAAAAAT
AATAGACAAAAGAAAATGGCACAAGGAATCACACGTGGTGCAGCTAAAAACAAAACATGAGCAAACACAAA
ACCCAAGGCAGCTTAGGGATAATTAGGTTGATTTAACCAGTAAGTTTATGATCCTTTTAGGGTGAGGACTCACT
GAGTGCACCTCCATCTCCAAGCACTGCTGCTGGAAGACCCCAATTCCCTCTTATCTATCAACTCTAGGACAAGGG
AGAACAAAAGCAAGCCAGAAGCAGAGGAGACTAATCAAAGGCAAAACAAAGGCTATTAACACATAGGAAAATATGT
ATTTACTAAGTGTACATTTCTCTAAGATGAAAGATTTTTACTCTAGAACTGTGCGAGCACACACACAATC
CTTTCTAACTTTATGGACACTAACTGGAGCCAATAGAAAAGACAAAAATGAAAGAGACACAGGGTGTATATCTA
GAACGATAATGCTTTTGCAGAACTAAAGCCTTTTTAAGAAATGCCAGCTGCTGTAGACCCCATGAGAAAAGATG
TCTTAATCATCCTTATGAAAACAGATGTAAACAATATATTTCAACTAACTTCATCTTCACTGCATAGCCTCAGG
CTAGTGAGTTTGCCAAAACCAAAGGGGGTGAATACTTCCCCAAGATTCTTCTGGGAGGATGGAAACAGTGCAGC
CCAGGTCCCATGGGGGCAGCTCCATCCCAGAGCATTCTGATAGTTGAACTGTAATTTCTACTCTTAAGTGAGAT
ATGAAGTATTATCCTTTTGTTCAGTTGCCCGGGCTTTTGAACAGAAGAGTAAATACAGAATTGAAAAGATAAA
CACTCAACCAACAATGTGAAAACGGGTTCTGTAGTATTTGTAAAAAGGCCCGGCCAGGACCACTGTGAGCTGG
AAAAGGGAGAAAGGCAGTGGGAAAAGAGGTGAGCCGAAGATCAATTCGACAGACAGACGGTGTGTATGCCCTCC
CTGTTTGACTTCACACACACTCATAACTTTCCAAATGAAACCCACAGTATAGCGCATATTTTCGATATTTTGT
GAATTCCAAAAGGAAATCACAGGGCTGTTTCGAAATATTGGGGGAACACTGTGTTTCTGCATCATCTGCATTGCT
CCCCAAGCAATGTAGAGGTGTTTAAAGGGCCCTCTGCTGGCTGAGTGGCAATACTACAACAACTTCAAGGCAAG
TTTGGCTGAAAACAGTTGACAACAAAGGGCCCCCATACTTATCCCTCAAATTTTAAAGTGATATGAAATACTTG
TCATGCTTTTGGCCAAATCAGAAGATATTCATCCTGCTTCAAGTCAGCTTCAGAAATGTTTTTAAAGGGACTTTA
GCTCTGGAACCTCAAATCAATTTATTAAGAGCCATATTTCTTAAAAAAAAGCTGGATAATATTATCTGTAATA
TTTCAGTCTTTTACAAGCCAAATACATGTGTCAATGTTTCTAGTATTTCAAAGAAGCAATTATGTAAAGTTGTTC
AATGTGACATAATAGTATTATAATTGGTTAAGTAGCTTAATGATTAGGCAAACCTAGATGAAAAGATTAGGGGCTT
CCACACTGCATAGATCACACGCACATAGCCACGCATACACACACAGACACACAGATGTGGGGTACACTGAATTC
AAAGCCCAAATGAATAGAAACACATTTTCTGGCTAGCAGAAAAACAAAACAAACTGTTGTTTCTCTTTCTTG
CTTTGAGAGTGTACAGTAAAAGGGATTTTTTCGAATTATTTTTATATTATTTTAGCTTTAATTGTGCTGTCGTT
ATGAAACAGAGCTGCTCTGCTTTTCTGTGAGATGGCAAGGGCTTTTTCAGCATCTCGTTTATGTGTGGAATTT
AAAAAGAATAAAGTTTTATTCCATTCTGAAAAAAAAAAAAAAAAA

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FIGURE 725

MNMSVLTLEYEFEKQFNENEAIQWMQENWKKSFLFSALYAAFIFGGRHLMNKRAKFELRKPLVLWSLTLAVFSI
FGALRTGAYMVYILMTKGLKQSVCDQGFYNGPVSKEWAYAFVLSKAPELGDTIFIILRKQKLIFLHWYHHITVLL
YSWYSYKDMVAGGGWFMTMNYGVHAVMYSYYALRAAGFRVSRKFAMFITLSQITQMLMGCVVNYLVFCWMQHDQC
HSHFQNIWFSSLMYLSYLVLFCHFFFEAYIGKMRKTTKAE

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FIGURE 726

GACGTTTCGCGCCAATTTGGTTGGCCGGCCACAGTCCACCGCGCGGAGATTCTCAGCTTCCCCAGGAGCAAGAC
CTCTGAGCCCGCCAAGCGCGGCCGCACGGCCCTCGGCAGCGATGGCACTGAAGGACTACGCGCTAGAGAAGGAAA
AGGTTAAGAAGTTCTTACAAGAGTTCTACCAGGATGATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCAGT
TGGTTCGGCTGGCTCATCGGGAACAGGTGGCTCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGAGT
TGGTGGACTCAATTTGTGAGAATGCCAGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCCTC
AGTACAAGGAGAGGGAAGTGGTAAATAAAGATGTCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCAGC
GGAGTCGGGACCCCTGGGATGGTCCGAAGCCCCCAGAACCAGTACCCTGCTGAACTCATGCGCAGATTTGAGCTGT
ATTTTCAAGGCCCTAGCAGCAGCAAGCCTCGTGTGATCCGGGAAGTGCGGGCTGACTCTGTGGGGAAGTTGGTAA
CTGTGCGTGGAAATCGTCACTCGTGTCTCTGAAGTCAAACCCAAGATGGTGGTGGCCACTTACACTTGTGACCAGT
GTGGGGCAGAGACCTACCAGCCGATCCAGTCTCCCACTTTTCATGCCTCTGATCATGTGCCCAAGCCAGGAGTGCC
AAACCAACCGCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATTCAGGAGATGAAGA
TGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGTGGTAGAAGGAGAGAACA
CAAGGATTGCCCAGCCTGGAGACCACGTCAGCGTCACTGGTATTTTCTTGCCAATCCTGCGCACTGGGTTCCGAC
AGGTGGTACAGGGTTTACTCTCAGAAACCTACCTGGAAGCCCATCGGATTGTGAAGATGAACAAGAGTGAGGATG
ATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAATTGCAGAGGAGGATTTCTACGAAAAGCTGG
CAGCTTCAATCGCCCCAGAAATATACGGGCATGAAGATGTGAAGAAGGCACTGCTGCTCCTGTAGTCGGGGGTG
TGGACCAGTCTCCTCGAGGCATGAAAATCCGGGGCAACATCAACATCTGTCTGATGGGGGATCCTGGTGTGGCCA
AGTCTCAGCTCCTGTACATATTGATCGACTGGCGCCTCGCAGCCAGTACACAACAGGCCGGGGCTCCTCAGGAG
TGGGGCTTACGGCAGCTGTGCTGAGAGACTCCGTGAGTGGAGAAGTACCTTAGAGGGTGGGGCCCTGGTGTGTCG
CTGACCAGGGTGTGTGCTGCATTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGTCA
TGGAGCAGCAGACCATCTCCATTGCCAAGGCCGGCATTCTCACCACACTCAATGCCCGCTGCTCCATCCTGGCTG
CCGCCAACCTGCCTACGGGCGCTACAACCCTCGCCGCAGCCTGGAGCAGAACATACAGCTACCTGCTGCACTGC
TCTCCCGGTTTGACCTCCTCTGGCTGATTACAGGACCGGCCCGACCGAGACAATGACCTACGGTTGGCCCAGCACA
TCACCTATGTGCACCAGCACAGCCGGCAGCCCCCTCCAGTTTGAACCTCTGGACATGAAGCTCATGAGGCGTT
ACATAGCCATGTGCCGCGAGAAGCAGCCCATGGTGCCAGAGTCTCTGGCTGACTACATCACAGCAGCATACGTGG
AGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACTTCTGCCCGGACCCTGCTGGCTATCCTGCGCC
TTTCCACTGCTCTGGCACGTCTGAGAATGGTGGATGTGGTGGAGAAAGAAGATGTGAATGAAGCCATCAGGCTAA
TGGAGATGTCAAAGGACTCTCTTCTAGGAGACAAGGGGCAGACAGCTAGGACTCAGAGACCAGCAGATGTGATAT
TTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGTTCTCTGAGGCAGAGCAGCGCTGTGTATCTC
GTGGCTTACACCCGCCAGTTCCAGGCGGCTCTGGATGAATATGAGGAGCTCAATGTCTGGCAGGTCAATGCTT
CCCGACACGGATCACTTTTGTCTGATTCCAGCCTGCTTGCAACCCTGGGGTCTCTTGTTCCTGCTGGCCTGC
CCCTTGGGAAGGGGCAGTGATGCCTTTGAGGGGAAGGAGGAGCCCTCTTCTCCCATGCTGCACTTACTCCTTT
TGCTAATAAAAGTGTGTTGTAGATTGTC

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FIGURE 727

MALKDYALEKEKVKKFLQEFYQDDELGKKQFKYGNQLVRLAHREQVALYVDLDDVAEDDPPELVDSICENARRYAK
LFADAVQELLQPQYKEREVVKNDVLDVYIEHRLMMEQSRDPGMVRSPQNQYPALMRRFELYFQGPSSSKPRVIR
EVRADSVGKLVTVRGIVTRVSEVKPKMVVATYTCDCQCGAETYQPIQSPTFMPLIMCPSQECQTNRSGGRLYLQTR
GSRFIKFQEMKMQEHSQVPVGNIPRSITVLVEGENTRIAQPGDHVSVTGIFLPILRTGFRQVVQGLLSETYLEA
HRIVKMNKSEDDDESGAGELTREELRQIAEEDFYEKLAASIAPEIYGHEDVKKALLLLLVGGVDQSPRGMKIRGNI
NICLMGDPGVAKSQLLSYIDRLAPRSQYTTGRGSSGVGLTAAVLRDSVSGELTLEGGALVLADQGVCCIDEFDKM
AEADRTAIHEVMEQQTISIAGILTTLNARCSILAAANPAYGRYNPRRSLEQNIQLPAALLSRFDLLWLIQDRP
DRDNDLRLAQHITYVHQHSRQPPSQFEPLDMKLMRRYIAMCREKQPMVPESLADYITAAYVEMRREAWASKDATY
TSARTLLAILRLSTALARLRMVDVVEKEDVNEAIRMEMSKDSLLGDKGQTARTQRPADVIFATVRELVS GG RSV
RFSEAEQRCVSRGFTPAQFQAALDEYEELNVWQVNASRTRITFV

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FIGURE 728

GCGGAGCGAGAGGCTGAGAGAGTCGGAGACACTATCCGCTTCCATCCGTCGCGCAGACCCTGCCGGAGCCGCTGC
CGCTATGGATGATCGAGAGGATCTGGTGTACCAGGCGAAGCTGGCCGAGCAGGCTGAGCGATACGACGAAATGGT
GGAGTCAATGAAGAAAGTAGCAGGGATGGATGTGGAGCTGACAGTTGAAGAAAGAAACCTCCTATCTGTTGCATA
TAAGAATGTGATTGGAGCTAGAAGAGCCTCCTGGAGAATAATCAGCAGCATTGAACAGAAAGAAGAAAAACAAGGG
AGGAGAAGACAAGCTAAAAATGATTCCGGGAATATCGGCCAAATGGTTGAGACTGAGCTAAAGTTAATCTGTTGTGA
CATTCTGGATGTACTGGACAAACACCTCATTCCAGCAGCTAACACTGGCGAGTCCAAGGTTTTCTATTATAAAAT
GAAAGGGGACTACCACAGGTATCTGGCAGAATTTGCCACAGGAAACGACAGGAAGGAGGCTGCCGAGAACAGCCT
AGTGGCTTATAAAGCTGCTAGTGATATTGCAATGACAGAACTTCCACCAACGCATCCTATTTCGCTTAGGTCCTG
TCTCAATTTTTCCGTATTCTACTACGAAATCTTAATTCCCCTGACCGTGCCTGCAGGTTGGCAAAAGCAGCTTT
TGATGATGCAATTGCAGAACTGGATACGCTGAGTGAAGAAAGCTATAAGGACTCTACACTTATCATGCAGTTGTT
ACGTGATAATCTGACACTATGGACTTCAGACATGCAGGCTGACGGTGAAGAGCAGAATAAAGAAGCGCTGCAGGA
CGTGGAAGACGAAAATCAGTGAGACATAAGCCAAACAAGAGAAACCATCTCTGACCACCCCTCCTCCCCATCCCA
CCCTTTGGAAACTCCCCATTGTCACTGAGAACCACCAAATCTGACTTTTACATTTGGTCTCAGAATTTAGGTTCC
TGCCCTGTTGGTTTTTTTTTTTTTTTTTTTTTTTAAACAGTTTTCAAAGTTCTTAAAGGCAAGAGTGAATTTCTGTG
GATTTTACTGGTCCCAGCTTTTAGGTTCTTTAAGACACTAACAGGACTACATAGAGGCTTTTTCAGCATTACTGT
GTCGTCTCCGTGCCAGATGTGGCAAGATCACCATTAGCAAATGGAAATTACATTTGAAAGCCATTAGACTTATAG
GTGATGCAAGCATCTAAGAGAGAGGTTAATCACACTATAGAGGCATAAGTGGTATCAGTTTTCATTTTTCTAATT
GTTTAAACTGTGTTTTATACCAGTGTGTGCAAGTAATTGGGTGTTAGCTTGAGATGGTTAAAGGTGGTTTGGGGA
GGGACTTCGTTGTAATGGTTTTGCTGTAAAAAATGTTTCCAACCTCCGCTGAAATGTTGCTGAAAAGCATGGTGCT
GGTAACAGTTCAACAATCCGTGGCTGCTCATTCTTGCCCTACTTTACTCTCCCACTGAAGCAGGTTAGCGTTGAAG
GTGGTATGGAAAAGCCTGCATGCCTGTTCAATTCTTTTGTTTCTTCTCCTTCCCCCTCCCCCTACCTCCTTCCCC
TCACTCCTCCCCCTCCTTCGCTCGCTCAACCTCTTTTGTTTCAAGTATGTGTAACCTGAAGCTAATTTGTACTACTGG
ATATCTGACTGGAGCCACAGATACAGAATCTGTATTGTTCTTACTGAAACACAGCATGGAATTAACATTAAACTT
AAATAAAACAAACCTAAATTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 729

MDDREDLVYQAKLAEQAERYDEMVESMKKVAGMDVELTVEERNLLSVAYKNVIGARRASWRIISSIEQKEENKGG
EDKLMIREYRQMVETELKLICCDILDVLDKHLIPAANTGESKVFYYKMGDYHRYLAEFATGNDRKEAAENSLV
AYKAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRLAKAAFDDAIAELDTLSEESYKDSTLIMQLLR
DNLTLTWTSMDMQDGEEQNKEALQDVEDENQ

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FIGURE 730

GGCACGAGGGGCGGCGGAGCCGACTCGTCGCGGCCGAGGCGCACGCGGTCCGCGCCGGCGTCAGTCTGGGATTGG
CCGCCCCGCGACTTCCTCCGCCCCCTGCCAATCGCCGGGGACGACTTCCGTGGGTTTTTCCGGCTCTCCCGCGTC
GCTAAGGAGCGACGGGCTGTCGGCCAGACCCGAGTTCTCGGTGCGCTCAGCGGCCCGCGACGCTAGGAGGCCGC
GCTCCGCCCCCGCTACCATGAGGCCCCGGAAGCCTTCTGCTCCTGCTGCTCTTGGGGCTGGTGCAGCTGCTGG
CCGTGGCGGGTGCCGAGGGCCCCGACGAGGATTCTTCTAACAGAGAAAATGCCATTGAGGATGAAGAGGAGGAGG
AGGAGGAAGATGATGATGAGGAAGAAGACGACTTGGAAAGTTAAGGAAGAAAATGGAGTCTTGGTCTAAATGATG
CAAACTTTGATAATTTTGTGGCTGACAAAGACACAGTGTGCTGGAGTTTTATGCTCCATGGTGTGGACATTGCA
AGCAGTTTGTCTCCGGAATATGAAAAATTGCCAACATATTAAAGGATAAAGATCCTCCCATTCCTGTTGCCAAGA
TCGATGCAACCTCAGCGTCTGTGCTGGCCAGCAGGTTTGATGTGAGTGGCTACCCACCATCAAGATCCTTAAGA
AGGGGCAGGCTGTAGACTACGAGGGCTCCAGAACCCAGGAAGAAAATTGTTGCCAAGGTCAGAGAAGTCTCCCAGC
CCGACTGGACGCCTCCACCAGAAGTCACGCTTGTGTTGACCAAAGAGAACTTTGATGAAGTTGTGAATGATGCAG
ATATCATTCTGGTGGAGTTTTATGCCCATGGTGTGGACACTGCAAGAACTTGCCCCGAGTATGAGAAGGCCG
CCAAGGAGCTCAGCAAGCGTTCTCCTCCAATTCCCCTGGCAAAGGTCGACGCCACCGCAGAAACAGACCTGGCCA
AGAGTTTGATGTCTCTGGCTATCCACCCTGAAAATTTCCGCAAAGGAAGGCCTTATGACTACAACGGCCAC
GAGAAAAATATGGAATCGTTGATTACATGATCGAGCAGTCCGGGCTCCCTCCAAGGAGATTCTGACCCTGAAGC
AGGTCCAGGAGTTCTGAAGGATGGAGACGATGTCATCATCATCGGGTCTTTAAGGGGGAGAGTGACCCAGCCT
ACCAGCAATACCAGGATGCCGCTAACAACTGAGAGAAGATTACAAATTTACCACACTTTTACGACAGAAATAG
CAAAGTTCTTGAAAGTCTCCCAGGGGCGAGTTGGTTGTAATGCAGCCTGAGAAATTCAGTCCAAGTATGAGCCCC
GGAGCCACATGATGGACGTCCAGGGCTCCACCCAGGACTCGGCCATCAAGGACTTCGTGCTGAAGTACGCCCTGC
CCCTGGTTGGCCACCGCAAGGTGTCAAACGATGCTAAGCGCTACACCAGGCGCCCCCTGGTGGTCTGCTACTACA
GTGTGGACTTCAGCTTTGATTACAGAGCTGCAACTCAGTTTTGGCGGAGCAAAGTCCTAGAGGTGGCCAAGGACT
TCCCTGAGTACACCTTTGCCATTGCGGACGAAGAGGACTATGCTGGGGAGGTGAAGGACCTGGGGCTCAGCGAGA
GTGGGGAGGATGTCAATGCCGCCATCCTGGACGAGAGTGGGAAGAAGTTCGCCATGGAGCCAGAGGAGTTTGACT
CTGACACCCTCCGCGAGTTTGTCACTGCTTTCAAAAAAGGAAAACCTGAAGCCAGTCATCAATCCCAGCCAGTGC
CCAAGAACAACAAGGGACCCGTCAAGGTGCTGGTGGGAAAAGACCTTTGACTCCATTGTGATGGACCCCAAGAAGG
ACGTCCTCATCGAGTTCTACGCACCATGGTGCGGGCACTGCAAGCAGCTAGAGCCCGTGTACAACAGCCTGGCCA
AGAAGTACAAGGGCCAAAAGGGCCTGGTCAATCGCCAAGATGGACGCCACTGCCAACGACGTCCCCAGCGACCGCT
ATAAGGTGGAGGGCTTCCCCACCATCTACTTCGCCCCCAGTGGGGACAAAAGAACCAGTTAAATTTGAGGGTG
GAGACAGAGATCTGGAGCATTGAGCAAGTTTATAGAAGAACATGCCACAAAACCTGAGCAGGACCAAGGAAGAGC
TTTGAAGGCTGAGGTCTGCGGAAGGTGGGAGGAGGCAGACACCCTGCGTGGCCATGGTTCGGGGCGTCCACGCC
GAGGCCGGCAACAAACGACAGTATCTCGGATTCCCTTTTTTTTTTTTTTTTAAATTTTTTATACTTTGGTGTTCAC
TTCATGCTCTGAATACTGAATAACCATGAATGACTGAATAGTTTAGTCCAGATTTTTACAGAGGATACATCTATT
TTTATCATTATTTGGGGTTTGAAAAATTTTTTTTTTACACCTTCTAATTTCTTTATTTCTCAAAGCAGATAATTCT
TCTGTGTGAAAATGTTTTCTTTTTTTAATTTAAGGTTAAAATTCCTTTGCCAATCATGTTGATTTTGCTCTTT
GCTTTTTCGTTGTCTGAGAAATTGTTGGCGTAGATTGGCTTCTGGTATGTGTTTCTGATTGCTTCCTGTTGAGC
ACAAAGTGAGAGCTGCCACTGAGCAGCCCTGCCAGGGGTGCTGTTTCAGGCTGGGCATCGCCAGGCGGCCCTCCCT
GCAAACCAAGGGCTGGGGGCAAAGGGGCATGATCCAGGGTCCCCAGGGTGGGCTCAGCTCCAGGGAGAGGCCAC
CCACGTGGCAGCCCCACCTCTTGAGAGCCCCAGTGCCGGAGCAGAAAGGACCCTGGACCCAGAGGCAGATACTG
CGGGTGGTAGAAAAGGTAGAGTAGGCTGTGGCAATGGAATAAAACACGATTAAAAACGTTAAAAA
AAAAA

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FIGURE 731

MRPRKAFLLLLLLGLVQLLAVAGAEGPDEDSSNRENAIEDEEEEEEEEDDDEEEDDLEVKEENGVLVLNDANFDNF
VADKDTVLLLEFYAPWCGHCKQFAPEYEKIANILKDKDPPIPVAKIDATSASVLASRFDVSGYPTIKILKKGQAVD
YEGSRTQEEIVAKVREVSQPDWTPPEVTLVLTKENFDEVVNDADIILVEFYAPWCGHCKKLAPEYEKAAKELSK
RSPP IPLAKV DATAETDLAKRFDVSGYPTLKIFRKGRPYDYNGPREKYGIVDYMIEQSGPPSKEILTLKQVQEF
KDGDDVIIIGVFKGESDPAYQQYQDAANNLREDYKFHHTFSTEIAKFLKVSQQLVVMQPEKFQSKYEPRSHMMD
VQGSTQDSAIDFVLKYALPLVGHRKVSNDKRYTRRPLVVVYYSVDFSFDRATQFWRKVLVAKDFPEYTF
AIADEEDYAGEVKDLGLSEGEDVNAAILDSEGGKFAMEPEEFDSDTLREFVTAFKKGKLKPVIKSQPVPKNNKG
PVKVVVGKTFDSIVMDPKKDVLIIEFYAPWCGHCKQLEPVYNSLAKKYKGQKGLVIAKMDATANDVP SDRYKVEGF
PTIYFAPSGDKKNPVKFEGGDRDLEHLSKFIEEHATKLSRTKEEL

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FIGURE 732

AGGTTCTCTTACATCGACCGCCTAAGAGTCGCGCTGTAAGAAGCAACAACCTCTCCTCTTCGTCTCCGCCATCAG
CTCGGCAGTCGCGAAGCAGCAACCATGCGTGAGTGCACTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGC
AATGCCTGCTGGGAGCTCTACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATT
GGGGGAGGAGATGATTCTTCAACACCTTCTTCAGTGAGACGGGGGCTGGCAAGCATGTGCCCCGGGCAGTGTTT
GTAGACTTGGAACCCACAGTCATTGATGAAGTTCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAACTT
ATCACAGGCAAAGAAGATGCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTC
GTGTTGGACCGAATTCGCAAGCTGGCCGACCAAGTGCACGGGTCTCCAGGGCTTCTTGGTTTTCCACAGCTTTGGT
GGGGAACTGGTTCCTGGGTTACCTCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTG
GAGTTCTCTATTTACCCGGCGCCCCAGGTTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCAC
ACCACCCTGGAGCACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCTAGAAAACCTC
GATATTGAGCGTCCAACCTATACTAACCTGAATAGGTTAATAGGTCAAATTGTGTCTCCATCACTGCTTCCCTG
AGATTTGATGGAGCCCTGAATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTATCCCCGCATCCACTTC
CCTCTGGCCACATATGCCCCGTGCATCTCTGCTGAGAAAAGCTACCATGAACAGCTTTCTGTAGCAGAGATCACC
AATGCTTGCTTTGAGCCAGCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTG
TTGTACCGTGGTGACGTGGTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAGACCAAGCGTACCATCCAG
TTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGAC
CTGGCCAAGGTACAGAGAGCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGAC
CACAAGTTTGACCTGATGTATGCCAAACGTGCCTTTGTTCACTGGTACGTTGGGGAGGGGATGGAGGAAGGTGAG
TTTTCAGAGGCCCCGTGAGGACATGGCTGCCCTTGAGAAGGATTATGAGGAGGTGGTGTGGATTCTGTTGAAGGA
GAGGGTGAGGAAGAAGGAGAGGAATACTAAAGTTAAAACGTACAAAGGTGCTGCTTTTACAGGGAAGCTTATTC
TGTTTTAAACATTGAAAAGTTGTGGTCTGATCAGTTAATTTGTATGTAGCAGTGTATGCTCTCATATACAATTAC
TGACCTATGCTCTAAAACATGAATGCTTTGTTACAGACCCAAGCTGTCCATTTCTGTGATGGGTTTTGAATAAAG
TATTCCTGTCTTAAAAAAAAAAAAA

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FIGURE 733

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMP SDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLIGQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDL MYAKRA FVHWYV GEGMEEGEFSEAREDMAALEKDYE EVGVDSVEGE GEEEEEE
Y

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FIGURE 734

AGGTTCTCTTACATCGACCGCCTAAGAGTCGCGCTGTAAGAAGCAACAACCTCTCCTCTTCGTCTCCGCCATCAG
CTCGGCAGTCGCGAAGCAGCAACCATGCGTGAGTGATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGC
AATGCCTGCTGGGAGCTCTACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATT
GGGGGAGGAGATGATTCCCTTCAACACCTTCTTCAGTGAGACGGGGGCTGGCAAGCATGTGCCCCGGGCAGTGT
GTAGACTTGGAACCCACAGTCATTGATGAAGTTCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAACTT
ATCACAGGCAAAGAAGATGCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTC
GTGTTGGACCGAATTCGCAAGCTGGCCGACAGTGACGGGTCTCCAGGGCTTCTTGGTTTTCCACAGCTTTGGT
GGGGGAAGTGGTCTGGGTTACCTCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTG
GAGTTCTCTATTTACCCGGCGCCCCAGGTTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCAC
ACCACCCTGGAGCACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTC
GATATTGAGCGTCCAACCTATACTAACCTGAATAGGTTAATAGGTCAAATTGTGTCTCCATCACTGCTTCCCTG
AGATTTGATGGAGCCCTGAATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTATCCCCGCATCCACTTC
CCTCTGGCCACATATGCCCCGTGCATCTCTGCTGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGAGATCACC
AATGCTTGCTTTGAGCCAGCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTG
TTGTACCGTGGTGACGTGGTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAGACCAAGCGTACCATCCAG
TTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGAC
CTGGCCAAGGTACAGAGAGCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGAC
CACAAGTTTGACCTGATGTATGCCAAACGTGCCTTTGTTCACTGGTACGTTGGGGAGGGGATGGAGGAAGGTGAG
TTTTTCAGAGGCCCCGTGAGGACATGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGA
GAGGGTGAGGAAGAAGGAGAGGAATACTAAAGTTAAAACGTCACAAAGGTGCTGCTTTTACAGGGAAGCTTATTC
TGTTTTAAACATTGAAAAGTTGTGGTCTGATCAGTTAATTTGTATGTAGCAGTGTATGCTCTCATATACAATTAC
TGACCTATGCTCTAAAACATGAATGCTTTGTTACAGACCCAAGCTGTCCATTCTGTGATGGGTTTTGAATAAAG
TATTCCTGTCTTAAAAAAAAAAAAAA

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FIGURE 735

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMDNEAIYDICRRNLDIERPTYT
NLNRLIGQIVSSITASLRFDGALNVDLTFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQFPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEVGVDVSVEGEHEEEGEE
Y

[illegible]

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FIGURE 737

MQQPFNYYPQIYWVDSSASSPWAPPGTVLPCPTSVPRRPGQRRPPPPPPPPPLPPPPPPPLPPLPLPPLKKG
NHSTGLCLLVMFFMVLVALVGLGLGMFQLFHLQKELAELESTSMHTASSLEKQIGHPSPPPEKKELRKVAHLT
GKSNSRSMPLWEDTYGIVLLSGVKYKKGGLVINETGLYFVYSKVYFRGQSCNNLPLSHKVYMRNSKYPQDLVMM
EGKMMSYCTTGQMWARSSYLGAFFNLTSADHLYVNVSELSLVNFEESQTFGLYKL

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FIGURE 738

GTAGATAGTCAGATGTCTTTTGAAAATGTGTTTTCGGTGTGGAATATTAACCCAATCTTTGATAACTCTTCCAGA
ACCTTCGGCTCGCGTGCTTCTGAGCTGCTGTGGATGGCCTCGGCTCTCTGGACTGTCCTTCCGAGTAGGATGTCA
CTGAGATCCCTCAAATGGAGCCTCCTGCTGCTGTCACTCCTGAGTTTCTTTGTGATGTGGTACCTCAGCCTTCCC
CACTACAATGTGATAGAACGCGTGAACCTGGATGTACTTCTATGAGTATGAGCCGATTTACAGACAAGACTTTCAC
TTCACACTTCGAGAGCATTCAAACCTGCTCTCATCAAAATCCATTTCTGGTCATTCTGGTGACCTCCCACCCTTCA
GATGTGAAAGCCAGGCAGGCCATTAGAGTTACTTGGGGTGAAAAAAGTCTTGGTGGGGATATGAGGTTCTTACA
TTTTTCTTATTAGGCCAAGAGGCTGAAAAGGAAGACAAAATGTTGGCATTGTCCTTAGAGGATGAACACCTTCTT
TATGGTGACATAATCCGACAAGATTTTTTAGACACATATAATAACCTGACCTTGAAAACCATTATGGCATTGAGG
TGGGTAACTGAGTTTTGCCCCAATGCCAAGTACGTAATGAAGACAGACACTGATGTTTTTCATCAATACTGGCAAT
TTAGTGAAATATCTTTTAAACCTAAACCACTCAGAGAAAGTTTTTACAGGTTATCCTCTAATTGATAATTATTCC
TATAGAGGATTTTACCAAAAAACCCATATTTCTTACCAGGAGTATCCTTTCAAGGTGTTCCCTCCATACTGCAGT
GGGTTGGGTTATATAATGTCCAGAGATTTGGTGCCAAGGATCTATGAAATGATGGGTACGTAACCAATCAAG
TTTGAAGATGTTTATGTCTGGGATCTGTTTGAATTTATTAAAAGTGAACATTCATATTCCAGAAGACACAAATCTT
TTCTTTCTATATAGAATCCATTTGGATGTCTGTCAACTGAGACGTGTGATTGCAGCCCATGGCTTTTTCTTCCAAG
GAGATCATCACTTTTTTGGCAGGTCATGCTAAGGAACACCACATGCCATTATTAACCTTCACATTCTACAAAAAGCC
TAGAAGGACAGGATACTTTGTGGAAAGTGTTAAATAAAGTAGGTACTGTGGAAATTCATGGGGAGGTCAGTGTG
CTGGCTTACACTGAACTGAACTCATGAAAAACCCAGACTGGAGACTGGAGGGTTACACTTGTGATTATTAGTC
AGGCCCTTCAAAGATGATATGTGGAGGAATTAATATAAAGGAATTGGAGGTTTTTGCTAAAGAAATTAATAGGA
CCAAACAATTTGGACATGTCATTCTGTAGACTAGAATTTCTTAAAAGGGTGTTACTGAATTATAAGCTCACTAGG
CTGTAAAAACAAAACAATGTAGAGTTTTATTATTGAACAATGTAGTCACTTGAAGGTTTTGTGTATATCTTATG
TGGATTACCAATTTAAAAATATATGTAGTTCTGTGTCAAAAACTTCTTCACTGAAGTTATACTGAACAAAATTT
TACCTGTTTTTGGTCATTTATAAAGTACTTCAAGATGTTGCAGTATTTTACAGTTATTATTATTAAAATTACTT
CAACTTTGTGTTTTTAAATGTTTTGACGATTTCAATACAAGATAAAAAGGATAGTGAATCATTCTTTACATGCAA
ACATTTTCCAGTTACTTAACTGATCAGTTTATTATTGATACATCACTCCATTAATGTAAAGTCATAGGTCATTAT
TGCACATCAGTAATCTCTTGGACTTTGTAAATATTTTACTGTGGTAATATAGAGAAGAATTAAAGCAAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 739

MASALWTVLPSRMSLRSLKWSLLLLSLLSFFVMWYLSLPHYNVIERVNWMYFYEYEPYRQDFHFTLREHSNCSSH
QNPFLVILVTSHPSDVKAQAIKVTWGEKKSWWGYEVLTFLLGQEAEEKDKMLALSLEDEHLLYGDIIRQDFLD
TYNNLTILKTIMAFRWVTEFCPNAKYVMKTDTDVFINTGNLVKYLNLNLNHSEKFFTGYPLIDNYSYRGFYQKTHIS
YQEYPFKVFPPYCSGLGYIMSRDLVPRIYEMMGHVKPIKFEDVYVGICLNLLKVNIHIPEDTNLFFLYRIHLDVC
QLRRVIAAHGFSSKEIITFWQVMLRNTTCHY

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FIGURE 740A

ATTTCCCGCCAGCAGGAGCCGCGCGGTAGATGCGGTGCTTTTAGGAGCTCCGTCCGACAGAACGGTTGGGCCTTG
CCGGCTGTGCGGTATGTCGCGACAGAGCACCTGTACAGCTTCTTCCCCAAGTCTCCGGCGCTGAGTGATGCCAAC
AAGGCCTCGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGTGCCCCCGGGCCTCTCCTTCCCCAGGCGGG
GATGCGGCCCTGGAGCGAGGCTGGGCCTGGGCCCAGGCCCTTGGCGCGATCCGCGTCACCGCCCAAGGCGAAGAAC
CTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGTGCCCCACCAGTTGTGACTTCTCACCAGGAGATTTGGTT
TGGGCCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGGTTTACAACCACCCCTTTGATGGAACATTCATCCGC
GAGAAAGGGAAATCAGTCCGTGTTTATGTACAGTTTTTTGATGACAGCCCAACAAGGGGCTGGGTAGCAAAAGG
CTTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAGGGAGGTCATTTTTACAGTGCAAAGCCTGAA
ATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAAGATTAAGAGGCTTGAATTGGCAGTTTGT
GATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTAGGCACAACCTTACGTAACAGATAAGAGTGAAGAA
GATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTAAGACACAAGGATCTAGGCGAAGTAGCCGCCAAATAAAA
AAACGAAGGGTCATATCAGATTCTGAGAGTGACATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAG
GAAGGAAGCAGTGATGAAATAAGCAGTGGAGTGGGGGATAGTGAGAGTGAAGGCCTGAACAGCCCTGTCAAAGTT
GCTCGAAAAGCGGAAGAGAATGGTGAAGTGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCA
GCCACAAAACAAGCAACTAGCATTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTCTGCCCTCAAATTTCT
GAATCCCAAGCCACGTTAGTGGAGGTGGTGATGACAGTAGTCGCCCTACTGTTTGGTATCATGAACTTTAGAA
TGGCTTAAGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGGCCTGATCACCCCGATTTTGATGCATCTACACTC
TATGTGCCTGAGGATTTCTCAATTCTTGTACTCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAACCTT
GATCTTGTTCATCTGTTACAAGGTGGGGAATTTTATGAGCTGTACCACATGGATGCTCTTATTGGAGTCAGTGAA
CTGGGGCTGGTATTTCATGAAAGGCAACTGGGCCATTCTGGCTTTCTGAAATTGCATTGGCCGTTATTTCAGAT
TCCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGGAAACAGACTGAGACTCCAGAAATGATGGAGGCACGATGT
AGAAAGATGGCACATATATCAAGTATGATAGAGTGGTGAGGAGGGAGATCTGTAGGATCATTACCAAGGGTACA
CAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAAGTATCTTCTTAGCCTCAAAGAAAAAGAG
GAAGATTCTTCTGGCCATACTCGTGCATATGGTGTGTGCTTTGTTGATACTTCACTGGGAAAGTTTTTCATAGGT
CAGTTTTCAGATGATCGCCATTGTTTCGAGATTTAGGACTCTAGTGGCACACTATCCCCCAGTACAAGTTTTATTT
GAAAAAGGAAATCTCTCAAAGGAACTAAAACAATTCTAAAGAGTTTATTGTCTCTCTTTCAGGAAGGTCTG
ATACCCGGCTCCAGTTTTTGGGATGCATCCAAACTTTGAGAACTCTCCTTGAGGAAGAATATTTTAGGGAAGAG
CTAAGTGATGGCATTGGGGTGATGTTACCCAGGTGCTTAAAGGTATGACTTCAGAGTCTGATTCCATTGGGTTG
ACACCAGGAGAGAAAAGTGAATTGGCCCTCTCTGCTCTAGGTGGTTGTGTCTTCTACCTCAAAAAATGCCTTATT
GATCAGGAGCTTTTATCAATGGCTAATTTTGAAGAATATATTCCCTTGGATTCTGACACAGTCAGCACTACAAGA
TCTGGTGCTATCTTACCAAAGCCTATCAACGAATGGTGCTAGATGCAGTGACATTAAACAACCTGGAGATTTTT
CTGAATGGAACAAATGGTTCTACTGAAGGAACCCCTACTAGAGAGGGTTGATACTTGCCATACTCCTTTTGGTAAG
CGGCTCCTAAAGCAATGGCTTTGTGCCCCACTCTGTAACCATTATGCTATTAATGATCGTCTAGATGCCATAGAA
GACCTCATGGTTGTGCCTGACAAAACTCCGAAGTTGTAGAGCTTCTAAAGAAGCTTCCAGATCTTGAGAGGCTA
CTCAGTAAATTCATAATGTTGGGTCTCCCTGAAGAGTCAGAACCACCCAGACAGCAGGGGCTATAATGTATGAA
GAACTACATACAGCAAGAAGAAGATTATTGATTTTCTTCTGCTCTGGAAGGATTCAAAGTAATGTGTAAATTT
ATAGGGATCATGGAAGAAGTTGCTGATGGTTTTAAGTCTAAAATCCTTAAGCAGGTATCTCTCTGCAGACAAAA
AATCCTGAAGGTCGTTTTCTGATTTGACTGTAGAATTGAACCGATGGGATACAGCCTTTGACCATGAAAAGGCT
CGAAAGACTGGACTTATTACTCCCAAAGCAGGCTTTGACTCTGATTATGACCAAGCTCTTGCTGACATAAGAGAA
AATGAACAGAGCCTCCTGGAATACCTAGAGAAACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTATTGGGGG
ATTGGTAGGAACCGTTACCAGCTGGAAATCCTGAGAATTTCAACACTCGCAATTTGCCAGAAGAATACGAGTTG
AAATCTACCAAGAAGGGCTGTAAACGATACTGGACCAAACTATTGAAAAGAAGTTGGCTAATCTCATAAATGCT
GAAGAACGGAGGGATGTATCATTGAAGGACTGCATGCGGCGACTGTTCTATAACTTTGATAAAAATTACAAGGAC
TGGCAGTCTGCTGTAGAGTGTATCGCAGTGTGGATGTTTTACTGTGCCTGGCTAACTATAGTCGAGGGGGTGAT
GGTCTATGTGTCGCCAGTAATTCTGTTGCCGGAAGATACCCCCCTTCTTAGAGCTTAAAGGATCACGCCAT
CCTTGCAATTACGAAGACTTTTTTTGGAGATGATTTTATTCCTAATGACATTCTAATAGGCTGTGAGGAAGAGGAG
CAGGAAAATGGCAAAGCCTATTGTGTGCTTGTACTGGACCAATATGGGGGGCAAGTCTACGCTTATGAGACAG
GCTGGCTTATTAGCTGTAATGGCCAGATGGGTTGTACGTCCCTGCTGAAGTGTGCAGGCTCACACCAATTGAT

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FIGURE 740B

AGAGTGTTTACTAGACTTGGTGCCTCAGACAGAATAATGTCAGGTGAAAGTACATTTTTTGGTTGAATTAAGTGAA
ACTGCCAGCATACTCATGTCATGCAACAGCACATTCTCTGGTGCTTGTGGATGAATTAGGAAGAGGTACTGCAACA
TTTGATGGGACGGCAATAGCAAATGCAGTTGTTAAAGAACTTGCTGAGACTATAAAATGTCGTACATTATTTTCA
ACTCACTACCATTTCATTAGTAGAAGATTATTCTCAAAATGTTGCTGTGCGCCTAGGACATATGGCATGTCATGGTA
GAAAATGAATGTGAAGACCCCAGCCAGGAGACTATTACGTTCCCTCTATAAATTCATTAAGGGAGCTTGTCTAAA
AGCTATGGCTTTAATGCAGCAAGGCTTGCTAATCTCCCAGAGGAAGTTATTCAAAGGGACATAGAAAAGCAAGA
GAATTTGAGAAGATGAATCAGTCACTACGATTATTTTCGGGAAGTTTGCCTGGCTAGTGAAAGGTCAACTGTAGAT
GCTGAAGCTGTCCATAAATTGCTGACTTTGATTAAAGGAATTATAGACTGACTACATTGGAAGCTTTGAGTTGACT
TCTGACCAAAGGTGGTAAATTCAGACAACATTATGATCTAATAAACTTTATTTTTTAAAAATGA

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FIGURE 741

MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSPGGDAWSEAGPGPRPLARSASPPKAKNLNGG
LRRSVAPAAPTSCDFSPGDLVWAKMEGYPPWWPCLVYNHPFDGTFIREKGKSVRVHVQFFDDSPTRGWVSKRLKPK
YTGSKSKEAQKGGHFYSAPKEILRAMQRADEALNKDKIKRLELAVCDEPSEPEEEEEEMEVEGTTYVTDKSEEDNEI
ESEEEVQPKTQGSRRSSRQIKKRRVISDSSESDIGGSDVEFKPDTKEEGSSDEISSGVGDSESEGLNSPVKVARRK
KRMVTGNGSLKRKSSRKETPSATKQATSISSETKNTLRAFSAPQNSSEQAHVSGGGDDSSRPTVWYHETLEWLKE
EKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQNFDLVICYKVKGKFYELYHMDALIGVSELGLV
FMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPEMMEARCRKMAHISKYDRVVRREICRIITKGTQYTS
VLEGDPSENYSKYLLSLKEKEEDSSGHTRAYGVCFVDTSLGKFFIGQFSDDRHCSTRFTLVAHYPPVQVLFKGN
LSKETKTIKSSSLCSLQEGIPGSQFWDASKTLRTLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGE
KSELALSALGGCVFYLLKCLIDQELLSMANFEEYIPLDSDTVSTTRSGAIFTKAYQRMVLDAVTLNLEIFLNGT
NGSTEGTLLERVDTCHTFPGKRLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKI
HNVGSPLKSQNHPSRAIMYEETYSKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVISLQTKNPEG
RFPDLTVELNRWDTAFDHEKARKTGLITPKAGFDSYDQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRN
RYQLEIPENFTTRNLPEEYELKSTKKGCKRYWTKTIEKKLANLINAEERRDVSLKDCMRRLFYNFDKNYKDWQSA
VECIAVLVDVLLCLANYSRGGDGPMCRPVILLPEDTPPFLELKGSRHPCITKTFFGDDFIPNDILIGCEEEQENG
KAYCVLVTGPNMGGKSTLMRQAGLLAVMAQMGCVPAEVCRLTPIDRVFTRLGASDRIMSGESTFFVELSETASI
LMHATAHSLVLVDELGRGTATFDGTAIANAVVKELAETIKCRTLFSTHYHSLVEDYSQNVAVRLGHMACMVENEC
EDPSQETITFLYKFIKGACPKSYGFNAARLANLP EEVIQKGRKAREFEKMNQSLRLFREVCLASERSTVDAEAV
HKLLTLIKEL

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FIGURE 742

GACGCCGACGATGAAGACACCGTGGAAGGTTCTTCTGGGACTGCTGGGTGCTGCTGCGCTTGTCAACATCATCAC
CGTGCCCGTGTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACAGTCGCAAACTTACACTCTAACTGA
TTACTTAAAAAATACTTATAGACTGAAGTTATACTCCTTAAGATGGATTTTCTTGGAGAACAGTACATTTGATGA
AGAAAAATAATATCTTGGTATTCAATGCTGAATATGGAAACAGCTCAGTTTTCTTGGAGAACAGTACATTTGATGA
GTTTGGACATTCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTTATTCTCTTAGAATACAACACTACGTGAA
GCAATGGAGGCATTCTACACAGCTTCATATGACATTTATGATTTAAATAAAAGGCAGCTGATTACAGAAGAGAG
GATTCCAAACAACACACAGTGGGTCACATGGTCACCGTGGGTCATAAATTGGCATATGTTTGGAAACAATGACAT
TTATGTTAAAAATTGAACCAAATTTACCAAGTTACAGAATTCATGACGGGGAAAGAGATATAATATATAATGG
AATAACTGACTGGGTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTCTGTGGTGGTCTCCAAACGGCACCTTT
TTTAGCATATGCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACTCCTTCTACTCTGATGAGTCACTGCA
GTACCCAAAGACTGTACGGGTTCATATCCAAAGGCAGGAGCTGTGAATCCAAGTGTAAAGTTCTTTGTTGTAA
TACAGACTCTCTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTGCTCCTGCTTCTATGTTGATAGGGGA
TCACTACTTGTGTGATGTGACATGGGCAACACAAGAAAGAATTTCTTTGCAGTGGCTCAGGAGGATTACAGAACTA
TTCGGTCATGGATATTTGTGACTATGATGAATCCAGTGGAAAGATGGAAGTCTTAGTGGCACGGCAACACATTGA
AATGAGTACTACTGGCTGGGTGGAAGATTTAGGCCTTCAGAACCTCATTTTACCCTTGATGGTAATAGCTTCTA
CAAGATCATCAGCAATGAAGAAGGTTACAGACACATTTGCTATTTCCAAATAGATAAAAAAGACTGCACATTTAT
TACAAAAGGCACCTGGGAAGTCATCGGGATAGAAGCTCTAACAGTGATTATCTATACTACATTAGTAATGAATA
TAAAGGAATGCCAGGAGGAAGGAATCTTTATAAAATCCAAGTCTAGTACTATACAAAAGTGACATGCCTCAGTTG
TGAGCTGAATCCGGAAGGTGTCAGTACTATTCTGTGTCATTTCAGTAAAGAGGCGAAGTATTATCAGCTGAGATG
TTCCGGTCTGGTCTGCCCTCTATACTCTACACAGCAGCGTGAATGATAAAGGGCTGAGAGTCTTGGAAAGACAA
TTCAGCTTTGGATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAAGTGGACTTCATTATTTTGAATGAAAC
AAAATTTTGGTATCAGATGATCTTGCCTCCTCATTTTGATAAATCCAAGAAATATCCTCTACTATTAGATGTGTA
TGCAGGCCCCATGTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGGCCACTTACCTTGCAAGCACAGAAAA
CATTATAGTAGCTAGCTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATAAGATCATGCATGCAATCAACAGAAG
ACTGGGAACATTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAAATTTTCAAAAATGGGATTTGTGGACAACAA
ACGAATTGCAATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGGTCCTGGGATCAGGAAGTGGCGTGTT
CAAGTGTGGAATAGCCGTGGCGCTGTATCCCGGTGGGAGTACTATGACTCAGTGTACACAGAACGTTACATGGG
TCTCCCAACTCCAGAAGACAACCTTGACCATTACAGAAATTCACAGTCATGAGCAGAGCTGAAAATTTTAAACA
AGTTGAGTACCTCCTTATTTCATGGAACAGCAGATGATAACGTTCACTTTTCAGCAGTCAGCTCAGATCTCCAAAGC
CCTGGTTCGATGTTGGAGTGGATTTCCAGGCAATGTGGTATACTGATGAAGACCATGGAATAGCTAGCAGCACAGC
ACACCAACATATATATATACCCACATGAGCCACTTCATAAAACAATGTTTCTCTTTACCTTAGCACCTCAAAATACC
ATGCCATTTAAAGCTTATTTAAACTCATTTTTGTTTTTATTATCTCAAACTGCACTGTCAAGATGATGATGATC
TTTAAATACACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAAATTTTACATCTATCATCTTAAGTAG
GGACTTCTGTCTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATCCGGTCCGGTTTTATTGTTTAAATC
ATTTCTGCATCAGCTGCTGAAACAACAAATAGGAATTGTTTTATGGAGGCTTTGCATAGATTCCCTGAGCAGGA
TTTTAATCTTTTTCTAACTGGACTGGTTCAAATGTTGTTCTTCTTTTAAAGGGATGGCAAGATGTGGGCAGTGA
TGTCCTAGGGCAGGGACAGGATAAGAGGGATTAGGGAGAGAAGATAGCAGGGCATGGCTGGGAACCCAAGTCCA
AGCATACCAACACGACCAGGCTACTGTGAGCTCCCTCGGAGAAAAGTGTGAGTCTGCGTGTGAACAGCTCTTC
TCCTTTAGAGCACAATGGATCTCGAGGGATCTTCATACCTACCAGTTCTGCGCTCGAGGCCGCGACTCTAGA

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FIGURE 743

MKTPWKVLLGLLGAAALVTIITVPVLLNKGTDDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDIYNGITDWVYEEVFSAVSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVPPYKAGAVNPTVKFFVVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHFTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSYLYYISNEYKGMPPGGRNLYKIQLSDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGPLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDGRGSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGWSYGGYVTSMLVLSGSGVFKCGIAVAPVSRWEYYDSVYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQAQISKALVDVGVDFQAMWYTDEDHGIASSTAHQH
IYTHMSHF IKQCFSLP

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FIGURE 744

CCGGTCGGATGCCGGACCGGGGGCACCGCTGAGGCGGTGGGTCCCCGACCTGCGAGACAGGTTTGGAAGCCCCCG
CTGCGCCCGAGTCCGTGCGGACCGCGAGGCCGCGGGCGGGTGGAGGCGCGTCTCCGGCACGATGAAGGATTTGGGG
GCAGAGCACTTGGCAGGTCATGAAGGGGTCCAACCTTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGA
TTCCAACCTCGAGAAAAAGGGCTGAGTTTGATTGAGGCTACCCCGGAGAATGATAACACTTTTGTGTCCAGGATTG
AGAAATGCCAAAGTTGAAGATTTAAGGAGTTTAGCCAACCTTTTTTGGATCTTGCACTGAAACTTTTTGTCTCGGCT
GTCAATATTTTGGACAGGTTCTTGGCTCTTATGAAGGTGAAACCTAAACATTTGTCTTGCACTTGAGAGTCTGTTCT
TTTTTGCTGGCTGCTAGAAATAGTTGAAGAAGACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAG
TGTAATGTACTGCTTCTGACATAAAACGGATGGAAAAAATAATTCAGAAAAATTGCACTATGAATTGGAAGCT
ACTACTGCCTTAAACTTTTTGCACCTTATACCATACTATTATACTTTGTCTACTTCAGAAAGGAAAGAAATACTG
AGCCTTGATAAACTAGAAGCTCAGCTGAAAGCTTGCAACTGCCGACTCATTTTTCAAAGCAAAACCATCTGTA
TTAGCCTTGTGCCTTCTCAATTTGGAAGTGGAACCTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTT
AAAAACATTCCAAGATTAATGACACTGAGTTCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTAT
TCTTCTCCTGAATGTTGCAAACAGATCTTAAGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCAGAACCTC
CACAACAGCTACTATAGTTCTCTGAGCTGCCAACGATACCTGAGGGGGGTGTTTTGATGAAAGTGAAAGTGAG
GACTCTTGTGAAGATATGAGTTGTGGAGAGGAGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGACCTTC
TTTTTCAACTTCAAAGTGGCACAACACTGTGCTTTCCATCTTAGAAATCTGATTGTTCTGTGAGAATTTATATT
TACAGGGTTTCAAAGCAATAAATGGGGGAATAGGTAGTTTCCTGGTTTAGCCCCCATCTAGTCAGGAATTAATAT
ACTGGAATACCTACCTTCTATTTGTTATTTCAGATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAAT
GGGGTAGTGCTCTTAAACCATTAAACAGTACTTTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACT
TTGGGGAGGAGGAAGGTGCTGATACCTTCAATTTGTTACTTTTCAAGATTTTTAAAAATACTAGTGTAGCTTA
TCTTAAACATTTTATAAAACCTTCAGATGTCTTTAAGCAGATTGGAAGTATGCAAGTGCTTCCTTAGCAGGGACA
GTGGATAATCCTTAATGGTTTATCATAGATTTACCCTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGT
CAAACACATTTTGTGTTTTGTTTTTAAATGATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGG
AATTATAATATTGACATTTCTGTGATTTTATATATGTAATGTCTTAATTGAGATTTGTGTTAAGGCAGAAATAA
TTAGGCTAGGGCTCTTAGTTTTCAATCCTATTGCCCAAGTATTGTCAAACCTATGGTATTATTTAATGTTACTT
TAAAAATCCATAATCTGCTAGTTTTGCATGTACTTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTAT
GGAATTGATAAATGTTGATCTGGTGTAGTATATTTTATCCGCAITTTTCTTATATTAAAAATGTTCTGCATGATT
ACATTTTATTTGCCTTTGT

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FIGURE 745

MKDLGAEHLAGHEGVQLLGLLNLYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTE
TFVLAVNILDRLALMKVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKMEKIISEKLH
YELEATTALNFLHLYHTIILCHTSEKKEILSLDKLEAQLKACNCRILFSKAKPSVLALCLLNLEVETLKSVELLE
ILLLVKKHISKINDTEFFYWRELVSCLAEYSSPECKPDLKKLVWIVSRRTAQNLHNSYYSVPELPTIPEGGCFD
ESESSEDCEDMSCGEESLSSSPSDQECTFFNFKVAQTLCFPS

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FIGURE 746

ATGGCCTGGATGCTGTTGCTCATCTTGATCATGGTCCATCCAGGATCCTGTGCTCTCTGGGTGTCCCAGCCCCCT
GAGATTCGTACCCTGGAAGGATCCTCTGCCTTCCTGCCCTGCTCCTTCAATGCCAGCCAAGGGAGACTGGCCATT
GGCTCCGTCACGTGGTTCCGAGATGAGGTGGTTCCAGGGAAGGAGGTGAGGAATGGAACCCAGAGTTCAGGGGC
CGCCTGGCCCCACTTGCTTCTTCCCGTTTCTCCATGACCACCAGGCTGAGCTGCACATCCGGGACGTGCGAGGC
CATGACGCCAGCATCTACGTGTGCAGAGTGGAGGTGCTGGGCCTTGGTGTCTGGGACAGGGAATGGGACTCGGCTG
GTGGTGGAGAAAGAACATCCTCAGCTAGGGGCTGGTACAGTCCTCCTCCTTCGGGCTGGATTCTATGCTGTCAGC
TTTCTCTCTGTGGCCGTGGGCAGCACCGTCTATTACCAGGGCAAATGCCACTGTCACATGGGAACACACTGCCAC
TCCTCAGATGGGCCCCGAGGRGTGATTCCAGAGCCCAGATGTCCCTTAG

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FIGURE 747

MAWMLLLILIMVHPGSCALWVSQPPEIRTLEGSSAFLPCSFNASQGRLAIGSVTWFRDEVVPGKEVRNGTPEFRG
RLAPLASSRFLHDHQAELHIRDVRGHDASIYVCRVEVLGLGVGTGNGTRLVVEKEHPQLGAGTVLLL RAGFYAVS
FLSVAVGSTVYYQGKCHCHMGTHCHSSDGPRGVIPEPRCP

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FIGURE 748

GGGGAGAATCTGGTGGATGCTGGACCTTGCTGCTGCTGCTACTGCTGTTTCCAGGGGCTGCAGAGCATGGACTGT
TAAATCTTGCACCTTCTTCTGAGTGAGCTGAATTCTTGCCGCCAGGATGGGGAAACAGAACAGCAAGCTGCGCCCG
GAGGTCATGCAGGACTTGCTGGAAAGCACAGACTTTACAGAGCATGAGATCCAGGAATGGTATAAAGGCTTCTTG
AGAGACTGCCCCAGTGGACATTTGTCAATGGAAGAGTTTAAGAAAATATATGGGAACTTTTCCCTTATGGGGAT
GCTTCCAAATTTGCAGAGCATGTCTTCCGCACCTTCGATGCAAATGGAGATGGGACAATAGACTTTAGAGAATTC
ATCATCGCCTTGAGTGTAACCTTCGAGGGGGAAGCTGGAGCAGAAGCTGAAATGGGCCTTCAGCATGTACGACCTG
GACGGAAATGGCTATATCAGCAAGGCAGAGATGCTAGTGATCGTGAGGCAATCTATAAGATGGTTTCTCTGTGA
ATGAAAATGCCTGAAGATGAGTCAACCCAGAGAAAAGAACAGAAAAGATCTTCCGCCAGATGGACACCAATAGA
GACGGAAAACCTCTCCCTGGAAGAGTTTATCCGAGGAGCCAAAAGCGACCCGTCATTGTGCGCCTCCTGCAGTGC
GACCCGAGCAGTGCCGGCCAGTTCTGAGCCCTGCGCCACCAATCGAATTGTAGAGCTGCTTGTGTTCCCTTTTG
ATTCTTCTTTTTTAACAATTTTTTTTTTTTTTTTGCCAAACAATATCAATGGTGATGCCGTCCCCTGTGCGGTCTGA
TGCGCCTTCTCCGTGACGCCTTCAGCCTCTTTTGTGCTGGATGCTTCGTGGGAATGCCAGAGCCCCAGTGTGC
TTGTGGAGAGCATGGACAGACTTCGTGGTGTTTATTGTTTGATGATTTTTAATCGTTACTATTATTTCTTTTTAT
TCTAATGTCTCTGTCTCTAAAACGTAAGACTCGGGGGTTGGGGCAAAAAGAGGAAACCCATCCAGTCTGTGATT
CTATTGCAAGCTTCAAGGGGCTTTTGTGTTGAAAGACAAAACCTCCCCACCTGGGTCTGTTGTACACAGTGCCGTAG
GGGTGATGGATGGCACCGGATGCTGGATTCCCCAAGAACAAGTTACCTCTGGGGTGAGGCTATTCCAGCGAGCT
GGGACATTTCCCCATGGGGGCCACTCCCCTCTCTTCCCCAGCAGGCTGTAGTTTCTAAGCTGTGAACATTTCAA
GATAAATTAACAGAGGAGAGGAAAAGATGGCTCAGCTATTTTTTCACAGGTTTACACTAGTTGAGCTAATATGC
GTGTCTTTGGAAATTAACACAAATGGTAACATATTCCAAAACCAGACCCATCTTGTGCTTATTGTGATAAAAT
AAAAGACGGCTGTATATAACATATTGGGTAATGCAGACCAAATTAAGTGTTTTGCCTTGTTTAAATGAAATGCA
TGTTTAGTGAGCACTAATAACAATCTTATTCCAGAAGACTGTTTTTAGTAGCTTATTGTGAAGTAAGACAACATA
ATGAATGTCTGTCTTGTGTTGGAAGTCATATCTGTCTTTGCACAAATGTACCAATCGACAAGTATATTTTATATAT
TCCATAAAAATACAAAGTAACCCTGACTAGGGCCCCAACTTTAATTTTGAATGCATTTCCAGAGTGGCCATGCCTA
GAGGGCAGATGCAGAGCAGGTGGTAGTGGGACAGGACAATTGGAGCACAGGAATGTTAACATGTATGACAGGGGA
CCAGTAGGGTGGTTTTCCCTCTCAGGCCCAGCAGCCATTGACAGCATTAGACTGGCGGCATGGTGCTTTTCTGAG
CAGATCAATACTCTGCAGACTCGAAAAACATCACATACATTCTTGGAACCTCCCAGTGGTTTAAATCTATGTGCA
TGGTTAGGGAGCCAGGCCTGGAATATTAGTTTTCCCTGCCCCCTGTAAAGAATCAGAGGTTGGGCAGTCATCAAA
TTCATCATAAAGACATGGGCAAGTGCTGTGTTTCCAAGGCCCCCTATGGAGAATCCAAAAGTATTTTCCA
TTGCCGTGCTCTTTGAATGCAGACTTCTATTTCCAGAAGTGACAGCACAACTCTGAGTTGCTGTTTGGTCTGGTG
ACCTCAGACACACTAATTTGAATTGAAAGCTAAGAGTAAAAATTTGCTGGTTACAGGCGAGTCATACTCTTGCAA
GTAGTTAGCAAAGGGAGGCCCAAATTCTCAAGGTTGTTGATGGGGAACTTGCCACTAAGAGAAGGCAGAGAGGTC
CCTAGTGGGTATATTTGCTGCCAAGCCACTTGCCAAAGAAGAGGAACCCAGAAAGAGAGACATCATGACCAGGA
GAAAAATGTGACTAGACATGCTAACCTCCAGGTTTTTATATATGACTTGAGTCTGCTGTAATTGGCAGCAGAAAT
CCAAATTTGTATGGTAGACCAAAAAGAACCAATCCATAGGGTGAAATTTTGAGACCTAGACTCTGTAAAAATAA
TCCTAGTCTTCCCTCCAGGGGTCAGTTCCCTCAGAGTGGTTCTGTACCAAACTTGCCAAATTCCTCCATGGCCAAG
TGTTAAAACTGTGTTTGGAAAATAGCGAATTAACCTAAGACACAGAAGGCAGACTGGGTGAGGAGACCTAGCAT
GCCCTATTGGCAGTGCTCAGGAGCTGCATCCCACTTTTCCCTGCTCTGAATCGAAGTCCTAGTTCCTTCTCTTTGA
TTCTCCTTTGGTAGGTGGAATCAGTTAATGTTTTGAGAAACCTGCCTGGGCTCTGCCCTTAGTCATGACATCTCG
CTGAGCCAGACCCACTCTGTTCCCTTGAACCTAGAGCTGGAGTGAGGAGTAGAGGTCTCCGGCTATTCCAGAAAAG
AAAAGTGAGCCACATGCAGGCTGATGAATGCCGACACTTCCAGAATGTATAGAAATAGTCCCTGTCTGCGCTGC
CACTGACCCTGTCTGTATTTTCTCGGAGGTTGTTTTCTCCTTCTCCTTCCCAGGAAGGTCTTTGTATGTGCAAT
CCAGTGCACTCAAGTTTGGCCAAGGGACTCCACAGCACCCAGAGGACTGCATGCCTCAAGGTTTATGTCACTCCT
CTGCTGGGCTGTTTCAATTGTCATTGCTGTGTTTCAAGGACCTTTGGAAATAAAACCTGTTCTGTCCCAATAAAACC
AGCCTGTGATGTTCAAGGGACTGGAATAAAGTGCTTACGACCTGAAGGATTCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 749

MGKQNSKLRPEVMQDLLESTDFTEHEIQEWYKGFLRDCPSGHLSMEEFKKIYGNFFPYGDASKFAEHVFRTFDAN
GDGTIDFREFI IALSVTSRGKLEQKLKWAFSMYDLGNGYISKAEMLVIVQAIYKMVSSVMKMPEDESTPEKRTE
KIFRQMDTNRDGKLSLEEFIRGAKSDPSIVRLLQCDPSSAGQF

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FIGURE 750

CACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAACCTTCCAGCCTGCGACCTGCGGAGAAAAAAATTACTTAT
TTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAAAATTAAATTTTAACCATGAGGGAAATCGTGACATCCAG
GCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTCTGGGAGGTGATCAGTGATGAACATGGCATCGACCCACC
GGCACCTACCACGGGGACAGCGACCTGCAGCTGGACCGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAA
TATGTTCTCTCGTGCCATCCTGGTGGATCTAGAACCTGGGACCATGGACTCTGTTTCGCTCAGGTCCCTTTTGGCCAG
ATCTTTAGACCAGACAACCTTTGTATTTGGTCAGTCTGGGGCAGGTAACAACCTGGGCCAAAGGCCACTACACAGAG
GGCGCCGAGCTGGTTGATTCTGTCTGGATGTGGTACGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTC
CAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCTGGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAA
TACCCTGATCGCATCATGAATACCTTCAGTGTGGTGCCTTCACCCAAAGTGTCTGACACCGTGGTCGAGCCCTAC
AATGCCACCCTCTCCGTCCATCAGTTGGTAGAGAATACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTAT
GATATCTGCTTCCGCACTCTGAAGCTGACCACACCAACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATG
AGTGGTGTCAACACCTGCCTCCGTTTCCCTGGCCAGCTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTC
CCCTTCCCACGTCTCCATTTCTTTATGCCTGGCTTTGCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCT
CTCAGAGTGCCGGAACCTACCCAGCAGGTCTTCGATGCCAAGAACATGATGGCTGCCTGTGACCCCCGCCACGGC
CGATACCTCACCGTGGCTGCTGTCTTCCGTGGTCCGATGTCCATGAAGGAGGTGATGAGCAGATGCTTAACGTG
CAGAACAAGAACAGCAGCTACTTTGTGGAATGGATCCCCAACAAATGTCAAGACAGCCGTCTGTGACATCCACCT
CGTGGCCTCAAGATGGCAGTCACCTTCATTGGCAATAGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAG
CAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAG
GAGGATTTCCGTGAGGAGGCCGAAGAGGAGGCCTAAGGCAGAGCCCCATCACCTCAGGCTTCTCAGTTCCCTTA
GCCGTCTTACTCAACTGCCCCCTTCTCTCCCTCAGAATTTGTGTTTGTCTGCCTCTATCTTGTTTTTTGTTTTTT
CTTCTGGGGGGGGTCTAGAACAGTGCCTGGCACATAGTAGGCGCTCAATAAATACTTGTGTTGTTGAATGTCTCCT
CTCTCTTCCACTCTGGGAAACCTAGGTTTCTGCCATTCTGGGTGACCTGTATTTCTTCTGGTGGCCATTCCA
TTTGTCCAGTTAATACTTCTCTTAAAAATCTCCAAGAAGCTGGGTCTCCAGATCCCATTTAGAACCAACCAGGT
GCTGAAAAACACATGTAGATAATGGCCATCATCCTAAGCCCAAAGTAGAAAAATGGTAGAAGGTAGTGGGTAGAAGT
CACTATATAAGGAAGGGGATGGGATTTTCCATTCTAAAAGTTTTGGAGAGGGAAATCCAGGCTATTAAAGTCACT
AAATTTCTAAGTATGTCCATTTCCCATCTCAGCTTCAAGGGAGGTGTCAGCAGTATTATCTCCACTTTCAATCTC
CCTCCAAGCTCTACTCTGGAGGAGTCTGTCCCACTCTGTCAAGTGGAAATCCTTCCCTTTCCAACCTCTACCTCCCT
CACTCAGCTCCCTTTCCCTGATCAGAGAAAGGGATCAAGGGGGTTGGGAGGGGGGAAAGAGACCAGCCTTGGTCC
CTAAGCCTCCAGAAACGTCTTCTTAATCCCCACCTTTTCTTACTCCCCAAAAAGAATGAACACCCCTGACTCTGG
AGTGGTGTATACTGCCACATCAGTGTGTTGAGTCAGTCCCCAGAGGAGAGGGGAACCCCTCCTCATCTTTTTTGCA
ACATCTCATTTCTTCTTTTGTGCTGTTGCTTCCCCCTCACACACTTGGTTTTGTTCTATCCTACATTTGAGATTT
CTATTTTATGTTGAACCTTGCTGCTTTTTTTCATATTGAAAAGATGACATCGCCCCAAGAGCCAAAAATAAATGGG
AATTGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 751

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLOGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDKNNM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVCDIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEEDFGEEAEEEA

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FIGURE 752

GAATTGAACCACCCATTTTCTTTCTTAGCCAAATCACCAAAATGTCCAGTTAGAACAAGAATTTAGCATTCTGC
AAAAGAAGTTAACAGCTGAGATAACGAGGAAATATTCTGAAATCGATCCCAAATATTTTCATCTTAATTTTGTTTT
GTGGACACCTGAACAATACATTTTTTTCAAAGACAGAGACAATTACAACAGAGAAGCAGTCACAGCCTACCTTAT
TCACATCATCAATGTCACAGGTATTGGCTAATTCTCAAAACACAACAGGGAATCCTTTGGGTCAACCAACACAAT
TCAGCGACACTTTTTCTGGACAATCAATATCACCTGCCAAAGTCACTGCTGGACAACCAACACCAGCTGTCTATA
CCTCTTCTGAAAAACCAGAAGCACATACTTCTGCTGGACAACCACTTGCCCTACAACACCAAAACAACCAACACCAA
TAGCCAAACACCTCCTCCCAGCAAGCCGTGTTACCTCTGCCAGACAACCTACCATCTGCCCCGTACTTCTACCACAC
AACCACCAAAGTCATTTGTCTATACTTTTACTCAACAATCATCATCTGTCCAGATCCCTTCTAGAAAACAAATAA
CTGTTTCATAATCCATCCACACAACCAACATCAACTGTCAAAAATTCACCTAGGAGTACACCAGGATTTATCTTAG
ATACTACCAGTAACAAACAAACCCCAACAAAAACAATTATAATTCAATAGCTGCCATACTAATTGGTGTACTTC
TGACTTCTATGTTGGTAGCTATAATCATCATTGTACTTTGGAAATGCTTAAGGAAACCAGTTTTAAATGATCAAA
ATTGGGCAGGTAGATCTCCATTTGCTGATGGAGAAACCCCTGACATTTGTATGGATAACATCAGAGAAAATGAAA
TATCCACAAAACGTACATCAATCATTTCACCTTACACCCTGGAAACCAAGCAAAAGCACACTTTTAGCAGATGACT
TAGAAATTAAGTTGTTTGAATCAAGTGAAGCAATTGAAGACTCCAACAACCCCAAAACAGAGAAAATAAAAGATC
AAGTAAATGGTACATCAGAAGATAGTGCTGATGGTTCAACAGTTGGAAGTCTGCTGTTTCTTCTCAGATGATGCAG
GTCTGCCTCCACCACCTCCCCTTCTGGATTTGGAAGGACAGGAAAGTAACCAATCTGACAAACCCACAATGACAA
TTGTATCTCCTCTTCCAAATGATTCTACTAGTCTCCCTCCATCTCTGGACTGTCTCAATCAAGACTGTGGAGATC
ATAAATCTGAGATAATACAATCATTTCACCGCTTGACTCACTTAACCTTGCCCCCTGCCACCAGTAGATTTTATGA
AAAACCAAGAAGATTCCAACCTTGAGATCCAGTGTGAGGAGTTCTCTATTCTCCCAACTCTGATCAAGATCTTA
ATGAATCCCTGCCACCTCCACCTGCAGAACTGTTATAAATATTACAACCTTGCTTTTTTAGCTGATCTTCCATCCTC
AAATGACTCTTTTTTCTTTATATGTTAACATATATAAAATGGCAACTGATAGTCAATTTTGATTTTTTATTCAGGA
ACTATCTGAAATCTGCTCAGAGCCTATGTGCATAGATGAACTTTTTTTTTAAAAAAGTTATTTAACAGTAATCT
ATTTACTAATTATAGTACCTATCTTTAAAGTATAGTACATTTTACATATGTAAATGGTATGTTTCAATAATTTAA
GAACTCTGAAACAATCTACATATACTTATTACCCAGTACAGTTTTTTTTTCCCCTGAAAAGCTGTGTATAAAATTA
TGGTGAATAAACTTTTATGTTTCCATTTCAAAGACCAGGGTGGAGAGGAATAAGAGACTAAGTATATGCTTCAAG
TTTTAAATTAATACCTCAAGTATTAAATAAATATTCCAAGTTTGTGGGAATGGGAGATTAAATGCATGTTTGAG
AGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 753

MDPKYFILILFCGHLNNTFFSKTETITTEKQSQPTLFTSSMSQVLANSQNTTGNPLGQPTQFSDTFSGQSISPAK
VTAGQPTPAVYTSSEKPEAHTSAGQPLAYNTKQPTPIANTSSQQAVFTSARQLPSARTSTTQPPKSFVYFTTQQS
SSVQIPSRKQITVHNPSTQPTSTVKNSPRSTPGFILDTTSNKQTPQKNNYNSIAAILIGVLLTSMMLVAIIIIVLW
KCLRKPVLNDQNWAGRSPFADGETPDICMDNIRENEISTKRTSIIISLTPWKPSKSTLLADDLEIKLFESSENIED
SNNPKTEKIKDQVNGTSEDSADGSTVGTA VSSSDAGLPPPPPLLDLEGQESNQSDKPTMTIVSPLPNDSTSLPP
SLDCLNQDCGDHKSEIIQSFPPLDSLNLPLPPVDFMKNQEDSNLEIQCEFSIPPNSDQDLNESLPPPPAELL

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FIGURE 754

ATGCGTGAGTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGC
CTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCCTCAAC
ACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCCGGGCAGTGTTTGTAGACTTGGAACCCACAGTCATT
GATGAAGTTCGCACTGGCACTTACCGCCAGCTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTTGGACCGAATTGCAAGCTG
GCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTTACC
TCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCC
CAGGTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATCGAGCGCCCAACCTACACT
AACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCCAGACCAACCTGGTGGCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCGTGC
ATCTCTGCTGAGAAAGCCTACCATGAACAGCTTACTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTATACCGTGGTGACGTGGTTCCC
AAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGTACCATCCAGTTTGTGGATTGGTGCCCCACTGGC
TTCAAGGTTGGCATTAAATTACCAGCCTCCCACTGTGGTGCCTGGCGGAGACCTGGCCAAGGTACAGAGAGCTGTG
TGCATGCTGAGCAATACCACAGCTGTTGCCGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTTCAGAGGCCCGTGAGGACATG
GCTGCCCTTGAGAAGGATTATGAGGAGGTTGGAGCAGATAGTGCTGACGGAGAGGATGAGGGTGAAGAGTATTAA

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FIGURE 755

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTFEQTNLVPYPRIHFPLATYAPVISAEKAYHEQLTVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAVAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEEVGADSADGEDEGEY

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FIGURE 756

GCCACACGGTCTTTGAGCTGAGTCGAGGTGGACCCTTTGAACGCAGTCGCCCTACAGCCGCTGATTCCCCCGCA
TCGCCTCCCGTGGAAGCCCAGGCCGCTTCGCAGCTTTCTCCCTTTGTCTCATAACCATGTCCACCAACGAGAAT
GCTAATACACCAGCTGCCCCGTCTTCACAGATTCAAGAACAAGGAAAAGACAGTACAGAAATGAGGCGTCGCAGA
ATAGAGGTCAATGTGGAGCTGAGGAAAGCTAAGAAGGATGACCAGATGCTGAAGAGGAGAAATGTAAGCTCATT
CCTGATGATGCTACTTCTCCGCTGCAGGAAAACCGCAACAACCAGGGCACTGTAAATTGGTCTGTTGATGACATT
GTCAAAGGCATAAATAGCAGCAATGTGGAAAATCAGCTCCAAGCTACTCAAGCTGCCAGGAACTACTTTCCAGA
GAAAAACAGCCCCCATAGACAACATAATCCGGGCTGGTTTGATTCCGAAATTTGTGTCTTCTTGCGCAGAACT
GATTGTAGTCCCATTTCAGTTTGAATCTGCTTGGGCACTACTAACATTGCTTCTGGGACATCAGAACAAACCAAG
GCTGTGGTAGATGGAGGTGCCATCCCAGCATTCAATTTCTCTGTTGGCATCTCCCCATGCTCACATCAGTGAACAA
GCTGTCTGGGCTCTAGGAAACATTGCAGGTGATGGCTCAGTGTTCCGAGACTTGGTTATTAAGTACGGTGCAGTT
GACCCACTGTTGGCTCTCCTTGCACTTCTTGATATGTCATCTTTAGCATGTGGCTACTTACGTAATCTTACCTGG
ACACTTTCTAATCTTTGCCGCAACAAGAATCCTGCACCCCGATAGATGCTGTTGAGCAGATTCTTCTACCTTA
GTTCCGGCTCCTGCATCATGATGATCCAGAAGTGTTAGCAGATACCTGCTGGGCTATTTCTTACCTTACTGATGGT
CCAAATGAACGAATTGGCATGGTGGTGAAAACAGGAGTTGTGCCCCAACTTGTGAAGCTTCTAGGAGCTTCTGAA
TTGCCAATTGTGACTCCTGCCCTAAGAGCCATAGGGAATATTGTCACTGGTACAGATGAACAGACTCAGGTTGTG
ATTGATGCAGGAGCACTCGCCGTCTTTCCAGCCTGCTCACCAACCCCAAACTAACATTCAGAAGGAAGCTACG
TGGACAATGTCAAACATCACAGCCGGCCGCGCCAGGACCAGATACAGCAAGTTGTGAATCATGGATTAGTCCCATT
CTTGTCAGTGTTCTCTCTAAGGCAGATTTTAAGACACAAAAGGAAGCTGTGTGGGCCGTGACCAACTATACCAGT
GGTGGAACAGTTGAACAGATTGTGTACCTTGTTCACTGTGGCATAATAGAACCGTTGATGAACCTCTTAACTGCA
AAAGATACCAAGATTATTCTGGTTATCCTGGATGCCATTTCAAATATCTTTCAGGCTGCTGAGAACTAGGTGAA
ACTGAGAACTTAGTATAATGATTGAAGAATGTGGAGGCTTAGACAAAATTGAAGCTCTACAAAACCATGAAAAT
GAGTCTGTGTATAAGGCTTCGTAAAGCTTAATTGAGAAGTATTTCTCTGTAGAGGAAGAGGAAGATCAAAACGTT
GTACCAGAACTACCTCTGAAGGCTACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTTAACTTTTTAGATC
ATGTAGCTGAGACATAAATTTGTTGTGTACTACGTTTGGTATTTTGTCTTATTGTTTCTCTACTAAGAACTCTTT
CTTAAATGTGGTTTGTGTTACTGTAGCACTTTTTACACTGAACTATACTTGAACAGTTCCAAGTGTACATACATAC
TGTATGAAGCTTGTCTCTGACTAGGTTTCTAATTTCTATGTGGAATTTCTATCTTGCAGCATCCTGTAAATAA
ACATTCAAGTCCACCCTTAAAAAAA

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FIGURE 757

MSTNENANTPAARLHRFKNKGKDDSTEMRRRRRIEVNVELRKAKKDDQMLKRRNVSSFPDDATSPLQENRNNQGTVN
WSVDDIVKGINSSNVENQLQATQAARKLLSREKQPPIDNIIIRAGLIPKFVSFLGRITDCSPIQFESAWALTNIASG
TSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSVFRDLVIKYGAVDPLLALLAVPDMSSLACGY
LRNLTWTLNLCRNKNPAPPIDAVEQILPTLVRLHHDDPEVLADTCWAI SYLTDGPNERIGMVVKTGVVPQLVK
LLGASELPIVTPALRAIGNIVTGTDEQTQVVIDAGALAVFPSLLTNPKTNIQKEATWTMSNITAGRQDQIQQVVN
HGLVPFLVSVLSKADFKTQKEAVWAVTNYTSGGTVEQIVYLVHCGIIEPLMNLLTAKDTKIILVILDAISNIFQA
AEKLGETEKL SIMIEECGGLDKIEALQNHENESVYKASLSLIEKYFSVEEEEDQNVVPETTSEGYTFQVQDGAPG
TFNF

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FIGURE 758

ATGGCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCAGTCAATAGCCGACCCTTCAGAGTCACAGGG
CCAAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAACAACCAAGGAAATGCCAGCCCTCCTGCAGGA
CCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCAGTCAAACCTTCTTCTGAGGAAAAGCCTGAC
AAGGAACCCAAGCCCCGTTTCTAAAGCCACTGGAGCAGGCCAAAGATTTCGGAACACCAGCCAGCTTGACCACC
AGAGACCCCGAGGCGAAAAGTGGGATTTCTGAAACCTGTAGGCCCAAGCCCATCAACTTGCCCAAAGAAGATTCC
AAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCACAGTGTAAACCAAGACCATGACTTAAAGCCA
CTAGGCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAACAGAAGCAAGCGTTTCCCAAATTGACTGGG
GTTAAAGGGAAATTTATGTCAGCATCACAAGATCTTGAACCCAAGCCCTCTTCCCCAAACCCGCTTTGGCCAG
AAGCCGCCCCTAAGTACCGAGAATCCCATGAAGACGAAAGCCCCATGAAGAATGTGTCTTCATCAAAAGGGTCC
CCAGCTCCCCCTGGGAGTCAGGTCCAAAAGCGGCCCTTTAAAACAGCAAGGGAAAGACTCAGAAAATAAAGACCAT
GCAGGGGAGATTTCAAGTTTGCCCTTTCTGGAGTGGTTTTGAAACCTGCTGCGAGCAGGGGAGGCCCAGGTCTC
TCCAAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCTGCTAAGAACACCTTCCAGAGCAAAATAAAT
CAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGTTCCCTAAGGCCCTTCTAAGCTGACAGTGGGGGGGCCA
TGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCCACCCCGAAACAGAAGCCATTGCCTCCCTTG
TTTACCTTGGGTCCACCTCCACCAAAACCCAACAGACCACCAAATGTTGACCTGACGAAATTCACAAAACCTCT
TCTGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAACCTTCCCTGCCACCACCTCCACCATCCCATCCG
GCCAGCCAACCACCATTGCCAGCATCTCACCATCACAACCACCAGTCCCAAGCCTACCTCCCAGAAACATTAA
CCTCCGTTTGACCTAAAAAGTCCTGTCAATGAAGACAATCAAGATGGTGTACGCACTCTGATGGTGTGAAAT
CTAGATGAGGAACAAGACAGTGAAGGAGAAACATATGAAGACATAGAAGCATCCAAAGAAAGAGAGAAGAAAAGG
GAAAAGGAAGAAAAGAGAGGTTAGAGCTGGAGAAAAAGGAACAGAAAGAGAAAGAAAAGAAACAAGAAATA
AAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTTGCAAAAGCTTGTTGTGATGTCAAAGGAGGA
AAGAATGAACTGAGCTTCAAGCAAGGAGAGCAAATTGAAATCATCCGCATCACAGACAACCCAGAAGGAAAATGG
TTGGGCAGAACAGCAAGGGGTTTCATATGGCTATATTAAAACAACCTGCTGTAGAGATTGACTATGATTCTTTGAAA
CTGAAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGATGACCAAGAAGTATATGATGATGTTGCAGAG
CAGGATGATATTAGCAGCCACAGTCAGAGTGGAAGTGGAGGGATATTCCCTCCACCACCAGATGATGACATTTAT
GATGGGATTGAAGAGGAAGATGCTGATGATGGCTCCACACTACAGGTTCAAGAGAAGAGTAATACGTGGTCTTGG
GGGATTTTGAAGATGTTAAAGGGAAAAGATGACAGAAAGAAAAGTATACGAGAGAAACCTAAAGTCTCTGACTCA
GACAATAATGAAGGTTTCATCTTTCCCTGCTCCTCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTG
GATACCTCTGATTTCCCTGTTTCATCAGCAGAGATGAGTCAAGGAACTAATTTTGGAAAAGCTAAGACAGAAGAA
AAGGACCTTAAGAAGCTAAAAAAGCAGGAAAAAGAAGAAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAA
ATTAGAGTCCTATATTCAACTAAAGTTACAACCTTCCATAACTTCTAAAAAGTGGGGAACCCAGAGATCTACAGGTA
AAACCTGGTGAATCTCTAGAAGTTATACAAACCACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAA
TATGGTTATGTCCTTCGGAGTTACCTAGCGGACAATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATC
TATGACAATGACT**AG**

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FIGURE 759

MAKYNTGGNPTEDVSVNSRPFVRTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEEKPD
KEPKPPFLKPTGAGQRFGTPASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNQDHDLP
LGPKSGPTPPTSENEQQAFFKLTGVKGKFMSASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRSGPLKPAREDSKNDHAGEISSLPFPGVVLKPAASRGGPGLSKNGEEKKEDRKIDAAKNTFQSKIN
QEELASGTTPPARFPKAPSKLTVGGPWGQSQEKEKGDKNSATPKQKPLPPLFTLGPPPPKPNRPPNVDLTKEFKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEKKRLELEKKEQKEKEKKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFKQGEQIEIIRITDNPEGKWLGRGTARGSYGYIKTTAVEIDYDSLKLKKDSLGLAPSRIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEEDADDGSTLQVQEKSNWWSWILKMLKGKDDRKKSIREKPKVSDS
DNNEGSSFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKAKTEEKDLKKLKKQEKEEKDFRKKFKYDGE
IRVLYSTKVTTISITSKKWGTRDLQVKPGESLEVIQTDDTKVLCRNEEGKYGYVLRSYLADNDGEIYDDIADGCI
YDND

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FIGURE 760

TAGGATGGAAAGGCAGATGTAAAGTCCCTC**ATG**GCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCA
GTCAATAGCCGACCCCTTCAGAGTCACAGGGCCAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAAC
AACCAAGGAAATGCCAGCCCTCCTGCAGGACCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCA
GTCAAACTTCTTCTGAGGAAAAGCCTGACAAGGAACCCAAGCCCCCGTTTCTAAAGCCCCTGGAGCAGGCCAA
AGATTGCGAACACCAGCCAGCTTGACCACCAGAGACCCCGAGGCGAAAAGTGGGATTTCTGAAACCTGTAGGCCCC
AAGCCCATCAACTTGCCCAAAGAAGATTCCAAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCAC
AGTGTAACCAAGACCATGACTTAAAGCCACTAGGCCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAA
CAGAAGCAAGCGTTTCCCAAATTGACTGGGGTTAAAGGGGAAATTTATGTCAGCATCACAAGATCTTGAACCCAAG
CCCCCTTTCCCCAAACCCGCCCTTTGGCCAGAAGCCGCCCTTAAGTACCGAGAACTCCCATGAAGACGAAAGCCCC
ATGAAGAATGTGTCTTCATCAAAAGGGTCCCCAGCTCCCCTGGGAGTCAGGTCCAAAGCGGCCCTTTAAACCA
GCAAGGAAGACTCAGAAAATAAAGACCATGCAGGGGAGATTTCAAGTTTGCCCTTTCTGGAGTGGTTTTGAAA
CCTGCTGCGAGCAGGGGAGGCCTAGGTCTCTCCAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCT
GCTAAGAACACCTTCCAGAGCAAAATAAATCAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGGTTCCCTAAG
GCCCCCTTCTAAGCTGACAGTGGGGGGGCCATGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCC
ACCCCGAAACAGAAGCCATTGCCTCCCTTGTTTACCTTGGGTCCACCTCCACCAAACCCAACAGACCACCAAAT
GTTGACCTGACGAAATTCACAAAACCTCTTCTGGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAACT
TCCCTGCCACCACCTCCACCATCCCATCCGGCCAGCCAACCACCATTGCCAGCATCTCACCATCACAACCACCA
GTCCCAAGCCTACCTCCCAGAAACATTAAACCTCCGTTTGACCTAAAAAGCCCTGTCAATGAAGACAATCAAGAT
GGTGTACGCACTCTGATGGTGTCTGGAATCTAGATGAGGAACAAGACAGTGAAGGAGAAACATATGAAGACATA
GAAGCATCCAAAGAAAGAGAGAAGAAAAGGGAAAAGGAAGAAAAGAGAGGTTAGAGCTGGAGAAAAAGGAACAG
AAAGAGAAAAGAAAAGAAAGAACAAGAAATAAAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTT
GCAAAAAGCTTGTTGTGATGTCAAAGGAGGAAAGAATGAACTGAGCTTCAAGCAAGGAGAGCAAATTGAAATCATC
CGCATCACAGACAACCCAGAAGGAAAATGGTTGGGCAGAACAGCAAGGGGTTTATATGGCTATATTAACAACAACT
GCTGTAGAGATTGACTATGATTCTTTGAAACTGAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGAT
GACCAAGAAGTATATGATGATGTTGCAGAGCAGGATGATATTAGCAGCCACAGTCAGAGTGAAGTGGAGGGATA
TTCCCTCCACCACCAGATGATGACATTTATGATGGGATTGAAGAGGAAGATGCTGATGATGGTTTCCCTGCTCCT
CCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTGGATACCTCTGATTTCCCTGTTTCATCAGCAGAG
ATGAGTCAAGGAACTAATTTTGGAAAAGCTAAGACAGAAGAAAAGGACCTTAAGAAGCTAAAAAAGCAGGAAAAA
GAAGAAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAATTAGAGTCTATATTCAACTAAAGTTACAACCT
TCCATAACTTCTAAAAAGTGGGGAACCAGAGATCTACAGGTAAACCTGGTGAATCTCTAGAAGTTATACAAACC
ACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAATATGGTTATGTCCTTCGGAGTTACCTAGCGGAC
AATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATCTATGACAATGAC**TAG**CACTCAACTTTGGTCATT

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FIGURE 761

MAKYNTGGNPTEDVSVNSRPFRVTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEEKPD
KEPKPPFLKPTGAGQRFGTPASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNQDHDLP
LGPKSGPTPPTSENEQQAFFPKLTGVKGKFMSASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRKSGPLKPAREDSENKDHAGEISSLPFGVVLKPAASRGGLGLSKNGEEKEDRKIDAAKNTFQSKIN
QEELASGTPPARFPKAPSKLTVGGPWGQSQEKEKGDKN SATPKQKPLPPLFTLGPPPPKPNRPPNVDLTKFHKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEEKKRLELEKKEQKEKEKKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFQGEQIEIIRITDNPEGKWLGR TARGSYGYIKTTAVEIDYDSLKLKDSL GAPSRPIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEEDADDGFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKA
KTEEKDLKKLKKQEKEEKDFRKKFKYDGEIRVLYSTKVTTTSITSKKWGTRDLQVKPGESLEVIQTDDTKVLCRN
EEGKYGYVLR SYLADNDGEIYDDIADGCIYDND

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FIGURE 762A

GCCCCAGGGCCTGGAGAGGTCTGAAGAAACCTGGGAGCCAGCAGCCCCGGGGCTCCACTCTGGGTTCTGAAAGCCC
ATTCCCTGCTCTGCGGCTCCTCCCACCCACCTCTTCTCAGCCTTGACAGCTCAAGGGTTGATCTCAGGAGTCCAG
GACCCAGGAGAGGGGAAGAATCTGAGGAACACAGAACAGTGAGCGTTGCCCCACACCCCATCTCCCGTCACCACATC
TCCCTCACCCTCACCCTCCCTGCCTGGCCCTGGACCCCATCCCAGGACCTCCCTATCAGCTGACTTCTTCCAGT
GTCTTGACAGGCCCCCTCTGGGCTCCTCCCTCCCTGGCTTTTCTTACCCTCCCCCTCTATCGGCGTCTATCTGTA
GGTGGCCTGGGATTTATAAACTGGGTTCCGAATGCTGAATAAGAGACGGTAAGAGCCAAGGCAAAGGACAGCAC
TGTTCTCTGCCTGCCTGATACCCTCACCACCTGGGAACATCCCCCAGACACCTCTTAACCTCCGGGACAGAGATG

GCTGGCGGAGCCTGGGGCCGCCTGGCCTGTTACTTGGAGTTCTTGAAGAAGGAGGAGCTGAAGGAGTTCCAGCTT
CTGCTGCCAATAAAGCGCACTCCAGGAGCTCTTGGGTGAGACACCCGCTCAGCCAGAGAAGACGAGTGGCATG
GAGGTGGCCTCGTACCTGGTGGCTCAGTATGGGGAGCAGCGGGCTGGGACCTAGCCCTCCATACCTGGGAGCAG
ATGGGGCTGAGGTCACTGTGCGCCCAAGCCCAGGAAGGGGAGGCGCACTCTCCCTCATTCCCCTACAGCCCAAGT
GAACCCACCTGGGGTCTCCCAGCCAACCCACCTCCACCGCAGTGCTAATGCCCTGGATCCATGAATTGCCGGCG
GGGTGCACCCAGGGCTCAGAGAGAAGGGTTTTGAGACAGCTGCCTGACACATCTGGACGCCGCTGGAGAGAAATC
TCTGCCTCACTCCTCTACCAAGCTCTTCCAAGCTCCCCAGACCATGAGTCTCCAAGCCAGGAGTCACCCAACGCC
CCCACATCCACAGCAGTGCTGGGGAGCTGGGGATCCCCACCTCAGCCAGCCTAGCACCCAGAGAGCAGGAGGCT
CCTGGGACCCAATGGCCTCTGGATGAAACGTGAGGAATTTACTACACAGAAATCAGAGAAAGAGAGAGAGAGAAA
TCAGAGAAAGGCAGGCCCCCATGGGCAGCGGTGGTAGGAACGCCCCCACAGGCGCACACCAGCCTACAGCCCCAC
CACCACCCATGGGAGCCTTCTGTGAGAGAGAGCCTCTGTTCCACATGGCCCTGGAAAAATGAGGATTTTAACCAA
AAATTCACACAGCTGCTACTTCTACAAAGACCTCACCCAGAAAGCCAAAGATCCCCTGGTCAAGAGAAGCTGGCCT
GATTATGTGGAGGAGAATCGAGGACATTTAATTGAGATCAGAGACTTATTTGGCCCAGGCCTGGATACCCAAGAA
CCTCGCATAGTCATACTGCAGGGGGCTGCTGGAATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGGAAGCCTGG
GGGAGAGGCCAGCTGTATGGGGACCGCTTCCAGCATGTCTTCTACTTCAGCTGCAGAGAGCTGGCCAGTCCAAG
GTGGTGAGTCTCGCTGAGCTCATCGGAAAAGATGGGACAGCCACTCCGGCTCCCATTAGACAGATCCTGTCTAGG
CCAGAGCGGCTGCTCTTCATCCTCGATGGTGTAGATGAGCCAGGATGGGTCTTGCCAGGAGCCGAGTTCTGAGCTC
TGTCTGCACTGGAGCCAGCCACAGCCGGCGGATGCACTGCTGGGCAGTTTGCTGGGGAAAACATACTTCCCAG
GCATCCTTCCCTGATCACGGCTCGGACCACAGCTCTGCAGAACCTCATTCTTCTTTGGAGCAGGCACGTTGGGTA
GAGGTCTGGGGTTCTCTGAGTCCAGCAGGAAGGAATATTTCTACAGATATTTACAGATGAAAGGCAAGCAATT
AGAGCCTTTAGGTTGGTCAAATCAAACAAGAGCTCTGGGCCCTGTGTCTTGTGCCCTGGGTGTCTGGCTGGCC
TGCACCTGCCTGATGCAGCAGATGAAGCGGAAGGAAAACTCACACTGACTTCCAAGACCACCACAACCTCTGT
CTACATTACCTTGCCAGGCTCTCCAAGCTCAGCCATTGGGACCCAGCTCAGAGACCTCTGCTCTCTGGCTGCT
GAGGGCATCTGGCAAAAAAGACCCTTTTCAGTCCAGATGACCTCAGGAAGCATGGGTTAGATGGGGCCATCATC
TCCACCTTCTTGAAGATGGGTATTCTTCAAGAGCACCCCATCCCTCTGAGCTACAGCTTCAATCACCTCTGTTTC
CAAGAGTTCTTTGCAGCAATGTCCTATGTCTTGGAGGATGAGAAGGGGAGAGGTAAACATTCTAATTGCATCATA
GATTTGAAAAAGACGCTAGAAGCATATGGAATACATGGCCTGTTTGGGGCATCAACCACACGTTTCCTATTGGGC
CTGTTAAGTGATGAGGGGGAGAGAGAGATGGAGAACATCTTCACTGCCGGCTGTCTCAGGGGAGGAACCTGATG
CAGTGGGTCCCGTCCCTGCAGCTGCTGCTGCAGCCACACTCTCTGGAGTCCCTCCACTGCTTGTACGAGACTCGG
AACAAAACGTTCTTGACACAAGTGATGGCCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAGCTC
TTAGTGTGCACTTTCTGCATTAAATTCAGCCGCCACGTGAAGAAAGCTTCAGCTGATTGAGGGCAGGCAGCACAGA
TCAACATGGAGCCCCACCATGGTAGTCCTGTTTCAAGGTGGGTCCAGTCACAGATGCCTATTGGCAGATTCTCTTC
TCCGTCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAACTCGCTGAGCCACTCTGCAGTGAAG
AGTCTTTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCTGCGGTTGGCTGGCTGTGGCCTCACAGCT
GAGGACTGCAAGGACCTTGCCCTTTGGGCTGAGAGCCAACCAGACCTGACCGAGCTGGACCTGAGCTTCAATGTG
CTCACGGATGCTGGAGCCAAACACCTTTGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAGCTG
GTCAGCTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCAGCCTGAAGGAG
CTAGACCTGCAGCAGAAACCTGGATGACGTTGGCGTGCGACTGCTCTGTGAGGGGCTCAGGCATCCTGCCTGC
AAACTCATACGCCTGGGGCTGGACCAGACAACCTCTGAGTGATGAGATGAGGCAGGAAGTGGGGCCTGGAGCAG
GAGAAACCTCAGCTGCTCATCTTCAGCAGACGGAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACGGGA
GAGATGAGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCTCAG

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FIGURE 762B

GCTAATCTCAAACCTCCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGAGGAAAGCTCCCCAGAGGTA
GTACCGGTGGAACTCTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGGACTGAC
GATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGAGTTCAC
TTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACCGTTGAG
ATTGAATTCTGTGTGTGGGACCAGTTTCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGGCCTCTG
CTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCATTGTGGCTCTCCAAGGGGGCCAT
GTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGGGTGGAG
CTGCATCACATAGTTCTGGAAAACCCACAGCTTCTCCCCCTTGGGAGTCCCTCCTGAAAATGATCCATAATGCCCTG
CGCTTCATTCCCGTCACCTCTGTGGTGTGCTTTACCACCGCTCCATCCTGAGGAAGTCACCTTCCACCTCTAC
CTGATCCCAAGTGAAGTGTCTCCATTGCGAAGGAAGTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTT
TCGGAGTTCTACGTTGGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAGACAAGAAAGATGAGACTCTGGTG
TGGGAGGCCTTGGTGAAACCAGGAGATCTCATGCCTGCAACTACTCTGATCCCTCCAGCCCGCATAGCCGTACCT
TCACCTCTGGATGCCCCGCAGTTGCTGCACCTTTGTGGACCAGTATCGAGAGCAGCTGATAGCCCGAGTGACATCG
GTGGAGGTTGTCTTGGACAAACTGCATGGACAGGTGCTGAGCCAGGAGCAGTACGAGAGGGTGTGGCTGAGAAC
ACGAGGCCCCAGCCAGATGCGGAAGCTGTTAGCTTGGAGCCAGTCCCTGGGACCGGAAGTGCAAAGATGGACTCTAC
CAAGCCCTGAAGGAGACCCATCCTCACCTCATTATGGAAGTCTGGGAGAAGGGCAGCAAAAAGGGACTCCTGCCA
CTCAGCAGCTGAAGTATCAACACCAGCCCTTGACCCTTGAGTCCCTGGCTTTGGCTGACCCTTCTTTGGGTCTCAG
TTTCTTTCTCTGCAAACAAGTTGCCATCTGGTTTGCTTCCAGCACTAAAGTAATGGAAGTTTGATGATGCCTTT
GCTGGGCATTATGTGTCCATGCCAGGGATGCCACAGGGGGCCCCAGTCCAGGTGGCCTAACAGCATCTCAGGGAA
TGTCCATCTGGAGCTGGCAAGACCCCTGCAGACCTCATAGAGCCTCATCTGGTGGCCACAGCAGCCAAGCCTAGA
GCCCTCCGGATCCCATCCAGGCGCAAAGAGGAATAGGAGGGACATGGAACCATTTGCCTCTGGCTGTGTACAGG
GTGAGCCCCAAAATTGGGGTTTACGCTGGGAGGCCACGTGGATTCTTGGCTTTGTACAGGAAGATCTACAAGAGC
AAGCCAACAGAGTAAAGTGGAAGGAAGTTTATTTCAGAAAAATAAGGAGTATCACAGCTCTTTTAGAATTTGTCTA
GCAGGCTTTCCAGTTTTTACCAGAAAACCCCTATAAATTAAAAATTTTTTACTTAAATTTAAGAATTAATAAAAAAT
ACAAAAAAGAAAAATGAAAATAAAGGAATAAGAAGTTACCTACTCCAAAAA

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FIGURE 763

MAGGAWGRLACYLEFLKKEELKEFQLLLANKAHSRSSSGETPAQPEKTSGMEVASYLVAQYGEQRAWDLALHTWE
QMGLRSLCAQAQEGAGHSPSFPYSPSEPHLGSPSQPTSTAVLMPWIHELPAGCTQGSERRVLRQLPDTSGRRWRE
ISASLLYQALPSSPDHESPQESPNAPTSTAVLGSWGSPQPQSLAPREQEAPGTQWPLDETSGIYYTEIRERERE
KSEKGRPPWAAVVGTPPQAHTSLQPHHPWEPVRESLCSTWPWKNEFDNQKFTQLLLLQRPHPRSQDPLVKRSW
PDYVEENRGHLIEIRDLFGPGLDTQEPRIVILQGAAGIGKSTLARQVKEAWGRGQLYGDRFQHVYFSCRELAQS
KVVSLAELIGKDGATATPAPIRQILSRPERLLFILDGVDEPGWVLQEPSSSELCLHWSQPQPADALLGSLGKTIPL
EASFLITARTTALQNLIPSLEQARWVEVLGFSESSRKEYFYRYFTDERQAIRAFRLVKSNNKELWALCLVPWVSWL
ACTCLMQMKRKEKLTLTSTTTTTLCLHYLAQALQAQPLGPQLRDLCSLAAEGIWQKKTLSFDDLRKHGLDGAI
ISTFLKMGILQEHPIPLSYSFIHLCFQEFFAAMS YVLEDEKGRGKHSNCIIDLEKTLEAYGIHGLFGASTTRFLL
GLLSDEGEREMENIFHCRLSQGRNLMQWVPSLQLLLQPHSLES LHCLYETRNTFTLTQVMAHFEEMGMCVETDME
LLVCTFCIKFSRHVKKLQLEGRQHRSTWSP TMVVLFRWVPVTDAYWQILFSVLKVTRNLKELDLSGNSLSHSAV
KSLCKTLRRPRCLLETLRLAGCGLTAEDCKDLAFGLRANQTLTELDLSFNVLTDAGAKHLCQRLRQPSCKLQRLQ
LVSCGLTSDCCQDLASVLSASPSLKELDLQNNLDDVGVRLLCGLRHPACKLIRLGLDQTTLSDEMRQELRALE
QEKPQLLIFSRRKPSVMTPTTEGLDTGEMSNSTSSLKRQRLGSERAASHVAQANLKLLDVSKIFFIAETAEESSPE
VVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGFPVATEVVDKEKNLYRVHFPVAGSYRWPN TG LCFVMREAVTV
EIEFCVWDQFLGEINPQHSWMVAGPLLD IKAEPGAVEAVHLPHFVALQGGHVDTS LFQMAHFKEEGMLLEKPARV
ELHHIVLENPSFSPLGVLLKMIHNALRFIPVTSVVLVYHRVHPPEEVTFHLYLIPSDCSIRKELELCYRSPGEDQL
FSEFYVGH LGSGIRLQVKDKKDETLVWEALVKPGDLMPATTLIPPARI AVPSPLDAPQLLHFVDQYREQLIARVT
SVEVLDKLGQVLSQEYERVLAENTRPSQMRKLFSLSQSWDRKCKDGLYQALKETHPHLIMELWEKGSKKGLL
PLSS

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FIGURE 764

AACGTTCTGACACAAGTGATGGCCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAGCTCTTAGT
GTGCACTTTCTGCATTAAATTCAGCCGCCACGTGAAGAAGCTTCAGCTGATTGAGGGCAGGCAGCACAGATCAAC
ATGGAGCCCCACCATGGTAGTCCTGTTTCAAGTGGGTCCCAGTCACAGATGCCTATTGGCAGATTCTCTTCTCCGT
CCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAAACTCGCTGAGCCACTCTGCAGTGAAGAGTCT
TTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCCTGCGGTTGGCTGGCTGTGGCCTCACAGCTGAGGA
CTGCAAGGACCTTGCCCTTTGGGCTGAGAGCCAACCAGACCCTGACCGAGCTGGACCTGAGCTTCAATGTGCTCAC
GGATGCTGGAGCCAAACACCTTTGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAGCTGGTCAG
CTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCACCTGAAGGAGCTAGAC
CTGCAGCAGAACAACCTGGATGACGTTGCGGTGCGACTGCTCTGTGAGGGGCTCAGGCATCCTGCCTGCAAACTC
ATACGCTTGGGGCTGGACCAGACAACCTCTGAGTGATGAGATGAGGAGGCAGGAACTGAGGGCCCTGGAGCAGGAGAAA
CCTCAGCTGCTCATCTTCAGCAGACGGAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACGGGAGAGATG
AGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCTCAGGCTAAT
CTCAAACTCCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGGCAAGAGCCACGAGGAAAGCTCCCCA
GAGGTAGTACCGGTGGAACCTTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGG
ACTGACGATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGA
GTTCACTTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACC
GTTGAGATTGAATTCTGTGTGTGGGACCAGTTTCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGG
CCTCTGCTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCACTTTGTGGCTCTCCAAGGG
GGCCATGTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGG
GTGGAGCTGCATCACATAGTTCTGGAACACCCAGCTTCTCCCCCTTGGGAGTCCCTCTGAAAATGATCCATAAT
GCCCTGCGCTTCATTCCCGTCACCTCTGTGGTGTGCTTTACCACCGCGTCCATCCTGAGGAAGTCACCTTCCAC
CTCTACCTGATCCCAAGTGACTGCTCCATTGCGAAGGCCATAGATGATCTAGAAATGAAATTCCAGTTTGTGCGA
ATCCACAAGCCACCCCGCTGACCCCACTTTATATGGGCTGTGCTTACACTGTGTCTGGGTCTGGTTTCAGGGATG
CTGGAAATACTCCCCAAGGAACCTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTCTCGGAGTTCTAC
GTTGGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTGTGGGAGGCCTTG
GTGAAACCAGGAAGGAACACCAGCCAGCCGTGGAACCTCAGGTGCAACAGAGACGCCAGGAGATACTAGTGCCCA
GCAGCCTGCGGCAGTACCAATGAAGCCAGAGAGGGCTTGGTGGATGACAAGGAGGCCTGAGTAGACCGCAGGTGG
GTCTGAGAAATGGGCTTAGGTGAGGCAGGTCTTTGAAGGATTTGTTCTTAATCATATGCGAGATGCTCAAAAGGC
TGGATGCCTGCTTTTGTGGGTGAAGAGCAAGAAGAGAAAACAGGTTGTACACATACAGATGCAGATGGAGAGACA
GAGAAAAAAAAGGAAGAAGGCAGAGAAATGCACCAATTCTTGAGCTGTATTATCTCTGGACCTTGGGATTGTGGG
AGGCTTTATTTTACTACTGATTTTGCCTACACTGTTTTCTCAATTCTAGTTTTCTACAAAGATGATGTGTTAGC
TTTTTCACGCAAAAAGATTAAATTTAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 765

MRQELRALEQEKPOLLI FSRRKPSVMTPTEGLDTGEMSNSTSSLKRQRLGSE
RAASHVAQANLKLLDVSKIFPIA
EIAGKSHEESSPEVVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGPVATEV
VDKEKNLYRVHFPVAGSYRWP
N
TGLCFVMREAVTVEIEFCVWDQFLGEINPQHSWMVAGPLLDIKAEPGAVEAVH
LPHFVALQGGHVDTSLFQMAHF
KEEGMLLEKPARVELHHIVLENPSFSPLGVLLKMIHNALRFIPVTSVLLYHRV
HPPEEVT FHLYLIPSDCSIRKA
IDDLEMKFQFVRIHKPPPLTPLYMGCRYTVSGSGSGMLEILPKELELCYRSPGE
DQLFSEFYVGH LGSGIRLQVK
DKKDETLVWEALVKPGRNTSQPWNLR CNRDARRY

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FIGURE 766

GAATTCCCAAACGTGCACAGGGGAGTGAGGGCAGGGCGCTCGCAGGGGGCACGCAGGGAGGGCCAGGGCGCCAG
GGAGGCCGCGCCGGGCTAATCCGAAGGGGCTGCGAGGTGAGGCTGTAACCGGGTCAATGTGTGGAATATTGGGGG
GCTCGGCTGCAGACTTGGCCAAATGGACGGGACTATTAAGGAGGCTCTGTCGGTGGTGAGCGACGACCAGTCCCT
CTTTGACTCAGCGTACGGAGCGGCAGCCCATCTCCCCAAGGCCGACATGACTGCCTCGGGGAGTCTTGACTACGG
GCAGCCCCACAAGATCAACCCCTCCACCACAGCAGGAGTGGATCAATCAGCCAGTGAGGGTCAACGTCAAGCG
GGAGTATGACCACATGAATGGATCCAGGGAGTCTCCGGTGGACTGCAGCGTTAGCAAATGCAGCAAGCTGGTGGG
CGGAGGCGAGTCCAACCCCATGAACACAACAGCTATATGGACGAGAAGAATGGCCCCCTCCTCCCAACATGAC
CACCAACGAGAGGAGAGTTCATCGTCCCCGACAGCCCCACACTGTGGACACAGGAGCATGTGAGGCAATGGCTGGA
GTGGGCCATAAAGGAGTACAGCTTGATGGAGATCGACACATCCTTTTTCCAGAACATGGATGGCAAGGAAGTGTG
TAAAATGAACAAGGAGGACTTCCTCCGCGCCACCACCTCTACAACACGGAAGTGTGTTGTACACCTCAGTTA
CCTCAGGGAAAGTTCAGTGTGGCTATAATAACAACCTCCACACCGACCAATCCTCAGATTGAGTGTCAAAGA
AGACCTTCTTATGACTCAGTCAGAAGAGGAGCTTGGGGCAATAACATGAATTCTGGCCTCAACAAAAGTCTCC
CCTTGGAGGGGCACAAACGATCAGTAAGAATACAGAGCAACGGCCCCAGCCAGATCCGTATCAGATCCTGGGCCC
GACCAGCAGTCGCCTAGCCAACCTGGAAGCGGGCAGATCCAGCTGTGGCAATTCTCCTGGAGCTGCTCTCCGA
CAGCGCCAACGCCAGCTGTATCCTGGGAGGGGACCAACGGGGAGTTCAAAATGACGGACCCCGATGAGGTGGC
CAGGCGCTGGGGCGAGCGGAAAAGCAAGCCCAACATGAATTACGACAAGCTGAGCCGGGCCCTCCGTTATTACTA
TGATAAAAACATTATGACCAAAGTGCACGGCAAAAAGATATGCTTACAAATTTGACTTCCACGGCATTGCCAGGC
TCTGCAGCCACATCCGACCGAGTCGTCCATGTACAAGTACCCTTCTGACATCTCCTACATGCCTTCTTACCATGC
CCACCAGCAGAAGGTGAACTTTGTCCCTCCCCATCCATCCTCCATGCCTGTCACTTCTCCAGCTTCTTTGGAGC
CGCATCACAATACTGGACCTCCCCACGGGGGAATCTACCCCAACCCCAACGTCCCCGCCATCCTAACACCCA
CGTGCCCTCACACTTAGGCAGCTACTACTAGAGCTTCTTCTAGCTGAAGCCCATCCTGCACACTTACTGGATGC
TTTGGACTCAACAGGACATATGTGGCCTTGAAGGGAAGACAAAACCTGGATGTTCTTTCTTGTGGATAGAACCTT
TGTATTGTCTTTTAAAAACATTTTTTTTTAATGTTGGTAACTTTTGCTTCTCTACCTGAACAAAGAGATGAATA
ATTCCATGGGCCAGTATGCCAGTTTGAATTCTCAGTCTCCTAGCATCTTGTGAGTTGCATATTAAGATTACTGGA
ATGGTTAAGTCATGGTTCTGAGAAAGAAGCTGTACGTTTCTTTATGTTTTTATGACCAAAGCAGTTTCTTGTCA
ATACACGGGGTTTCAGTATGACACAGAATCATGGACTTAACCCGTCATGTTCTGGTTTGAGATTTAGTGACAAATA
GAGGTGGGAAGCTTATAATCTAATTTTAGGAGGACCAAATTCAGCGGATGGCAACTGGAACATTGATTGTAAGGC
CAGTGAAGTTTTACCCAACTGGAATTTGATGGAAAGAAGGTTTGTGTGTTTAAGACGCCAAGGGCATTGCAGAA
TCCCTCTCAGTGGACAGTATGCACTCAGCTGACCACTCTCTCTAGAAATAGTCAAGATATGAACAAAGAAATTT
AATGCAAATACATACATTCTGAAAGACGGGGAATTAAATTAATAATTTTAAATGATGACAGTGGTC
CCAGAACTTGAAAAGTTGTAGGGATTTCTAAACTCAAGCAGATTCGCAAGTGCTGTGCGCTTGTGACACCATCA
GACCAGGGCCAACCAATCAGAAGGCAACTTACTGTATAAATTATGCAGAGTTATTTTCTATATCTCACAGTATT
AAAAATAAATAATTAATAAATAAATAAACGAGTTGACCTCGGTCACAAAAGCAGTTTTACTATCGAAT
CAATCGCTGTTATTTTTTTTTAATGTAATTTGTACATCTTTTTCAATCTGTACATTTGGGCTGTCTTGTATGTT
TTTATGCTCCTTTTTTAAAGCATAATATGCCTATAGCTGAAAAGGAAACAGGGCTGTTTAAAGTCACTGACTTAT
GAGAAAGCAAAGCACTGGTACAGTTATTTAACAGGCATACACAAGCAGGGAAGATAATCCATTTAGATCTTTA
ATGCTTTGGAAATGCGTGTAACAGTACTGCAATAATCACAGCTCTGGGAAAAACAACGAACTTTCCCTTGTGGA
GAGGAGGGATTTTCTGCTCTATATAAGCAACATATTTTAGACATTAAATATATATAATTTTGCAGGTAATTG
TTGACTTTTTTAACTATATTAAGTGTTAAGCTGACAACTGTCAAAGAAGACCATGTTGTAAATAATTTGACTAA
ATAATGGTTCCTTCTCTCAAAAAAAAAAAAAA

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FIGURE 767

MDGTIKEALSVVSDDQSLFDSAYGAAHLPKADMTASGSPDYGQPHKINPLPPQQEWINQPVRVNVKREYDHMNG
SRESPVDCSVSKCSKLVGGGESNPMNYSYMDEKNGPPPPNMTTNERRVIVPADPTLWTQEHVRQWLEWAIKEYS
LMEIDTSFFQNMDGKELCKMNKEDFLRATTLYNTEVLLSHLSYLRESSLLAYNTTSHTDQSSRLSVKEDPSYDSV
RRGAWGNMNSGLNKSPPLGGAQTISKNTQRPQPDYQILGPTSSRLANPGSGQIQLWQFLLELLSDSANASCI
TWEGTNGEFKMTDPDEVARRWGERKSKPNMNYDKLSRALRYYYDKNIMTKVHGKRYAYKFDFHGIAQALQPHPT
SSMYKYPSDISYMP SYHAHQKVNFVPPHPSSMPVTSSSFFGAASQYWTSP TGGIYPNPVPRHPNTHVP SHLGS
YY

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FIGURE 768

GTTTGTGGCTGCGGCAGCAGGTAGCAAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGA
ACCAGCGGTTACCATGGAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTA
TGACTCCATGAAGGAACCCTGTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCCACCATCTACTC
CATCATCTTCTTAAGTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAAACTGAGAAG
CATGACGGACAAGTACAGGCTGCACCTGTCTAGTGGCCGACCTCCTCTTTGTCATCACGCTTCCCTTCTGGGCAGT
TGATGCCGTGGCAAAGTGGTACTTTGGGAACTTCCTATGCAAGGCAGTCCATGTCTATACACAGTCAACCTCTA
CAGCAGTGTCTCATCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAG
GCCAAGGAAGCTGTTGGCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGA
CTTCATCTTTGCCAACGTGAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGT
GGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTCTATCCTGTCTGCTATTGCA
TATCATCTCCAAGCTGTACACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCT
GGCTTTCTTCGCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAAATCATCAA
GCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTCCATCACCGAGGCCCTAGCTTTCTTCCACTGTTG
TCTGAACCCCATCCTCTATGCTTTCTTGGAGCCAAATTTAAACCTCTGCCCAGCACGCACTCACCTCTGTGAG
CAGAGGGTCCAGCCTCAAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTCTCTGTTTCCACTGAGTCTGAGTC
TTCAAGTTTTCACTCCAGCTTAACACAGATGTAAAAGACTTTTTTTTATACGATAAATAACTTTTTTTTAAGTTAC
ACATTTTTTCAGATATAAAAGACTGACCAATATTGTACAGTTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCT
TTAGTTTTTGTGAAGTTTAATTGACTTATTTATATAAATTTTTTTTGTTCATATTGATGTGTGTCTAGGCAGGA
CCTGTGGCCAAGTTCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGT
GTAGTGAATCACGTAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGGAACGT
TTTTCTGTCTTAAAGACGTGATTTTGCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATG
CTGGTTTTTCAGTTTTCAGGAGTGGGTTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAGTTGTTAATAAA
AGTACATGTTAACTTACTTAGTGTTATG

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FIGURE 769

MEGISIYTS DNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSMTDK
YRLHLSVADLLFVITLFPWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLDRYLAI VHATNSQRPRKL
LAEKV VYVGWIPALLLTIPDFIFANVSEADDRYICDRFYPNDLWVVVFQFHIMVGLILPGIVILSCYCIISK
LSHSGHQKRKALKTTVILILAFFACWLPYYIGISIDSFILLEIIKQGCEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKFKTSAQHALTSVSRGSSLKILSKGKRGGHSSVSTESESSSFHSS

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FIGURE 770

TGCCTGCTGAGGGTGGAGACCCACGAGCCGAGGCCTCCTGCAGTGTTCTGCACAGCAAACCGCACGCTATGGGCTG
ACAGCCGGGATCCCGCCAGCGACCAGATGCAGCACTGGAAGGAGCAGCGGGCCGCGCAGAAAGCTGATGTCCTGA
CCACTGGAGCTGGTAACCCAGTAGGAGACAACTTAATGTTATTACAGTAGGGCCCCGTGGGCCCCCTTCTTGTTT
AGGATGTGGTTTTCTACTGATGAAATGGCTCATTTTTGACCGAGAGAGAATTCCTGAGAGAGTTGTGCATGCTAAAG
GAGCAGGGGGCCTTTGGCTACTTTGAGGTACACATGACATTACCAAATACTCCAAGGCAAAGGTATTTGAGCATA
TTGGAAAGAAGACTCCCATCGCAGTTCGGTTCTCCACTGTTGCTGGAGAATCGGGTTCAGCTGACACAGTTTCGGG
ACCCTCGTGGGTTTGAGTGAAATTTTACACAGAAGATGGTAACCTGGGATCTCGTTGGAAATAACACCCCCATTT
TCTTCATCAGGGATCCCATATTGTTTCCATCTTTTATCCACAGCCAAAAGAGAAATCCTCAGACACATCTGAAGG
ATCCGGACATGGTCTGGGACTTCTGGAGCCTACGTCTGAGTCTCTGCATCAGGTTTCTTTCTTGTTTCAGTGATC
GGGGGATTCCAGATGGACATCGCCACATGAATGGATATGGATCACATACTTTCAAGCTGGTTAATGCAAATGGGG
AGGCAGTTTATTGCAAATTCATTATAAGACTGACCAGGGCATCAAAAACCTTTCTGTTGAAGATGCGGCGAGAC
TTTCCCAGGAAGATCCTGACTATGGCATCCGGGATCTTTTAAACGCCATTGCCACAGGAAAGTACCCCTCCTGGA
CTTTTACATCCAGGTCATGACATTTAATCAGGCAGAACTTTTCCATTTAATCCATTTCGATCTCACCAAGGTTT
GGCCTCACAAGGACTACCCTCTCATCCAGTTGGTAAACTGGTCTTAAACCGGAATCCAGTTAATTACTTTGCTG
AGGTTGAACAGATAGCCTTCGACCCAAGCAACATGCCACCTGGCATTGAGGCCAGTCTGACAAAATGCTTCAGG
GCCGCTTTTTGCCTATCCTGACACTACCGCCATCGCCTGGGACCCAATTATCTTCATATACCTGTGAAGTGTG
CCTACCGTGCTCGAGTGGCCAACTACCAGCGTGATGGCCGATGTGCATGCAGGACAATCAGGGTGGTGCTCCAA
ATTACTACCCCAACAGCTTTGGTGCTCCGGAACAACAGCCTTCTGCCCTGGAGCACAGCATCCAATATTCTGGAG
AAGTGCGGAGATTCAACACTGCCAATGATGATAACGTTACTCAGGTGCGGGCATTCTATGTGAACGTGCTGAATG
AGGAACAGAGGAAACGTCTGTGTGAGAACATTGCCGGCCACCTGAAGGATGCACAAATTTTCATCCAGAAGAAAG
CGGTCAAGAACTTCACTGAGGTCCACCCTGACTACGGGAGCCACATCCAGGCTCTTCTGGACAAGTACAATGCTG
AGAAGCCTAAGAATGCGATTACACCTTTGTGCAGTCCGGATCTCACTTGGCGGCAAGGGAGAAGGCAAATCTGT
GAGGCCGGGGCCCTGCACCTGTGCAGCGAAGCTTAGCGTTTATCCGTGTAACCCGCTCATCACTGGATGAAGATT
CTCCTGTGCTAGATGTGCAAATGCAAGCTAGTGGCTTCAAAAATAGAGAATCCCACTTTCTATAGCAGATTGTGTA
ACAATTTTAAATGCTATTTCCCCAGGGGAAAATGAAGGTTAGGATTAAACAGTCATTTAAAAAAAATTTGTTTT
GACGGATGATTGGATTATTCATTTAAAATGATTAGAAGGCAAGTTTCTAGCTAGAAATATGATTTTATTTGACAA
AATTTGTTGAAATTATGTATGTTTACATATCACCTCATGGCCTATTATATTAATAATATGGCTATAAATATATAAA
AAGAAAAGATAAAGATGATCTACTCAGAAATTTTTATTTTCTAAGGTTCTCATAGGAAAAGTACATTTAATACA
GCAGTGTATCAGAAGATAACTTGAGCACCGTCATGGCTTAATGTTTATTCCTGATAATAATTGATCAAATTCAT
TTTTTTCCTGAGTTACATTAATGTTAATTCAGCACTGATTTCAACAGATCAATTTGTAATTGCTTACATTT
TTACAATAAATAATCTGTACGTAAGAACA

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FIGURE 771

MADSRDPASDQMQRHWKEQRAAQKADVLTTGAGNPVGDKLNVITVGPRGPLLVDVFTDEMAHFDRERIPERVVH
AKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVRFSTVAGESGSADTVRDPRGFAVKFYTEDGNWDLVGNNT
PIFFIRDPILEPSEFIHSQKRNPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGHRHMNGYGSHTFKLVNA
NGEAVYCKFHYKTDQGIKNLSVEDAARLSQEDPDYGIRDLFNAIATGKYPSWTFYIQVMTFNQAETFPFNPFDLT
KVWPHKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNMPPGIEASPDKMLQGRLFAYPDTHRHRLGPNYLHIPV
NCPYRARVANYQRDGPMMQDNQGGAPNYYPNSFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVNV
LNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKNAIHTFVQSGSHLAAREKA
NL

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FIGURE 772A

ACAGCACAGACAGATTGACCTATTGGGGTGTTCGCGAGTGTGAGAGGGAAGCGCCGCGGCCTGTATTTCTAGAC
CTGCCCTTCGCCTGGTTCTGTGGCGCCTTGTGACCCCGGGCCCCCTGCCGCTGCAAGTCGGAATTCGCTGTGCT
CCTGTGCTACGGCCTGTGGCTGGACTGCCTGCTGCTGCCCAACTGGCTGGCAAGATGAAGCTCTCCCTGGTGGCC
GCGATGCTGCTGCTGCTCAGCGCGGCGCGGGCCGAGGAGGAGGACAAGAAGGAGGACGTGGGCACGGTGGTGGC
ATCGACCTGGGGACCACCTACTCCTGCGTCGGCGTGTTCAGAAGCGCCGCTGGAGATCATGCCAACGATCAG
GGCAACCGCATCACGCCGTCCTATGTGCGCTTCACTCCTGAAGGGGAACGTCTGATTGGCGATGCCGCAAGAAC
CAGCTCACCTCCAACCCCGAGAACACGGTCTTTGACGCCAAGCGGCTCATCGGCCGCACGTGGAATGACCCGTCT
GTGCAGCAGGACATCAAGTTCTTGCCGTTCAAGGTGGTTGAAAAGAAAACATAACCATACTTCAAGTTGATATT
GGAGGTGGGCAAACAAAGACATTTGCTCCTGAAGAAATTTCTGCCATGGTTCTCACTAAAATGAAAGAAACCGCT
GAGGCTTATTTGGGAAAGAAGGTTACCCATGCAGTTGTTACTGTACCAGCCTATTTTAATGATGCCCAACGCCAA
GCAACCAAAGACGCTGGAACATATTGCTGGCCTAAATGTTATGAGGATCATCAACGAGCCTACGGCAGCTGCTATT
GCTTATGGCCTGGATAAGAGGGAGGGGGAGAAGAACATCCTGGTGTGTTGACCTGGGTGGCGGAACCTTCGATGTG
TCTCTTCTCACCATTGACAATGGTGTCTTCGAAGTTGTGGCCACTAATGGAGATACTCATCTGGGTGGAGAAGAC
TTTGACCAGCGTGTATGGAACACTTCATCAAACTGTACAAAAAGAACGGGCAAAGATGTCAGGAAAGACAAT
AGAGCTGTGCAGAACTCCGGCGCGAGGTAGAAAAGGCCAAACGGGCCCTGTCTTCTCAGCATCAAGCAAGAATT
GAAATTGAGTCCTTCTATGAAGGAGAAGACTTTTCTGAGACCTGACTCGGGCCAAATTTGAAGAGCTCAACATG
GATCTGTTCCGGTCTACTATGAAGCCCGTCCAGAAAGTGTGGAAGATTCTGATTTGAAGAAGTCTGATATTGAT
GAAATTGTTCTTGTGGTGGCTCGACTCGAATTCCAAAGATTGAGCAACTGGTTAAAGAGTTCTTCAATGGCAAG
GAACCATCCCGTGGCATAAACCCAGATGAAGCTGTAGCGTATGGTGTGCTGTGTCAGGCTGGTGTGCTCTCTGGT
GATCAAGATACAGGTGACCTGGTACTGCTTGATGTATGTCCCTTACACTTGGTATTGAACTGTGGGAGGTGTC
ATGACCAAACCTGATTCCAAGGAACACAGTGGTGCCTACCAAGAAGTCTCAGATCTTTTCTACAGCTTCTGATAAT
CAACCAACTGTTACAATCAAGGTCTATGAAGGTGAAAGACCCCTGACAAAAGACAATCATCTTCTGGGTACATTT
GATCTGACTGGAATTCCTCCTGCTCCTCGTGGGGTCCACAGATTGAAGTCACCTTTGAGATAGATGTGAATGGT
ATTCTTCGAGTGACAGCTGAAGACAAGGGTACAGGGAACAAAAATAAGATCACAAATCACCAGTACGAGTACGC
CTGACACCTGAAGAAATCGAAAGGATGGTTAATGATGCTGAGAAGTTTGCTGAGGAAGACAAAAGCTCAAGGAG
CGCATTGATACTAGAAATGAGTTGGAAGCTATGCCTATTCTCTAAAGAATCAGATTGGAGATAAAGAAAAGCTG
GGAGGTAAACTTTCTCTGAAGATAAGGAGACCATGGAAGAAAGCTGTAGAAGAAAAGATTGAATGGCTGGAAAGC
CACCAGATGCTGACATTGAAGACTTCAAAGCTAAGAAGAAGGAAGTGAAGAAATTTGTTCAACCAATTATCAGC
AAACTCTATGGAAGTGCAGGCCCTCCCCAACTGGTGAAGAGGATACAGCAGAAAAAGATGAGTTGTAGACACTG
ATCTGCTAGTGCTGTAATATTGTAATACTGGACTCAGGAACCTTTGTTAGGAAAAAATTGAAAGAACTTAAGTC
TCGAATGTAATTGGAATCTTCACCTCAGAGTGGAGTTGAAACTGCTATAGCCTAAGCGGCTGTTTACTGCTTTTC
ATTAGCAGTTGCTCACATGTCTTTGGGTGGGGGGGAGAAGAAGAAATTGGCCATCTTAAAAAGCAGGTAAAAAACC
TGGGTAGGGTGTGTGTTACCTTCAAATGTTCTATTTAACTGGGTGATGTGCATCTGGTGTAGGAAGTTT
TTTCTACCATAGTGACACCAATAAATGTTTGTTATTTACACTGGTCTAATGTTTGTGAGAAGCTTCTAATTAGA
TCAATTACTTATTTTAGGAAATTTAAGACTAGATACTCGTGTGTGGGGTGAGGGGAGGGAGTATTGGTATGTTG
GGATAAGGAAACACTTCTATTTAATGCTTCCAGGGATTTTTTTTTTTTTTTTTTTTAAACCCTCCTGGGCCCCAAGTGA
TCCTTCCACCTCAGTCTCCAGCTAATTGAGACCACAGGCTTGTTACCACCATGCTCGGCTTTTGCATTAATCTA
AGAAAAGGGGAGAGAAGTTAATCCACATCTTTACTCAGGCAAGGGGCATTTACAGTGCCCAAGAGTGGGGTTTT
CTTGAACATACTTGGTTTCTTATTTCCCTTATCTTTCTAAACTGCCTTCTGGTGGCTTTTTTTTAAATTATT
ACTAATGATGCTTTTATAGCTGCTTGGATTCTCTGAGAAATGATGGGGAGTGAGTGATCACTGGTATTAACCTTA
TACACTTGGATTTCAATTTGTAACCTTAGGATGTAAAGGTATATTGTGAACCCTAGCTGTGTGAGAATCTCCATCC
CTGAAATTTCTCATTAGTGGTACTGGGGTGGGATCTTGGATGGTGACATTGAACTACACTAAATCCCCTCACTA
TGAATGGGTGTTTAAAGGCAATGGTTTGTGTCAAACCTGGTTTAGGATTACTTAGATTGTGTTTCTGAAGAAAAG
AGTCCAGGTAAATGGTATGATCAATAAAGGACAGGCTGGTGCTAACATAAAATCCAATATTGTAATCCTAGCACT
TTGGGAGGCCAAGGCGGGTGGATCACAAGGTCAAGAGATAGAGACCATCTTTGCCAACATGGTGAAGTCCATCT
CTACTGAAAAATACAAAAATTAGCTGGGCGTGGTAGTGCAAGCTGAAGGCTGAGGCAGGAGAATCACTCGAACCCG
GGAGGCAGAGGTTGCAGTGAGCCGAGATCACACCACTGTACTCCAGCCCGGCACTCCAGCCTGGCGACAAGAGTG
AGACTCCACCTCAAAAAAAAAAAAAAGAATCCAATACTGCCAAGGATAGGTATTTTATAGATGGGCAACTGGCT

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FIGURE 772B

GAAAGGTTAATTCTCTAGGGCTAGTAGAACTGGATCCCAACACCAAACCTCTTAATTAGACCTAGGCCTCAGCTGC
ACTGCCCCGAAAAGCATTGTTGGGCAGACCCTGAGCAGAATACTGGTCTCAGGCCAAGCCCAATACAGCCATTAAAGA
TGACCTACAGTGCTGTGTACCCTGGGGCAATAGGGTTAAATGGTAGTTAGCAACTAGGGCTAGTCTTCCCTTACC
TCAAAGGCTCTCACTACCGTGGACCACCTAGTCTGTAACTCTTTCTGAGGAGCTGTTACTGAATATTAAAAAGAT
AGACTTCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 773

MKLSLVAAMLLLLSAARAEEDKKEDVGTVVGIDLGTTYSCVGVFKNGRVEI IANDQGNRITPSYVAFTPEGERL
IGDAAKNQLTSNPENTVFDARLIGRTWNDPSVQQDIKFLPFKVVEKKTTPYIQVDIGGGQTKTFAPEEISAMVL
TKMKETAAYLGKKVTHAVVTPAYFNDAQRQATKDAGTIAGLNVMRI INEPTAAA IAYGLDKREGEKNILVFDL
GGGTFDVSLLTIDNGVFEVVATNGDTHLGGEDFDQRVMEHF I KLYKKKTGKDVRKDNRAVQKLRREVEKAKRALS
SQHQARIEIESFYEGEDFSETLTRAKFEELNMDLFRSTMKPVQKVLEDSDLKKSDIDEIVLVGGSTRIPKIQQLV
KEFFNGKEPSRGINPDEAVAYGA AVQAGVLSGDQDTGDLVLLDVCPLTLGIETVGGVMTKLIPRNTVVPTTKSQI
FSTASDNQPTVTIKVYEGERPLTKDNHLLGTFDLTGIPPAPRGVPQIEVTFEIDVNGILRVTAEDKGTGNKNKIT
ITNDQNRILTPEEIERMVNDAEKFAEEDKKLKERIDTRNELESYAYSLKNQIGDKEKLGGKLSSSEDKETMEKAVEE
KIEWLESHQDADIEDFKAKKKELEEIVQPIISKLYGSAGPPPTGEEDTAEKDEL

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FIGURE 774A

TCTCACTATAGGGCTCGAGCGGCCGCGGGCAGGTCTGACCACAGTGGTTCCGGGGAGAAGCCTTCCAGGACCC
ATGTGTAGGCACAACCTGTTTTCCCTGATCAGGATACTTCCGGCACTCAACAGAGGAAAGAAATTCCTAAGGGAAC
ACTGCTCAGAAAGTACTGCAGCATGTCTTCAAATGCCTGAGGATCAAGTTGGAAAACCTAGAAGCAACAGAAAACA
CAATAAGCGCAATGGCGGCGGCCGCGGGCAGGAGCAGCAACAGTTCTACCTGCTGCTGGGAAACCTGCTCAGCCCCG
ACAATGTGGTCCGGAAACAGGCAGAGGAAACCTATGAGAATATCCCAGGCCAGTCAAAGATCACATTCTCTTAC
AAGCCATCAGAAATACAACAGCTGCTGAAGAGGCTAGACAAATGGCCGCCGTTCTCCTAAGACGTCTCTTGTCTT
CTGCATTGTGATGAAGTCTATCCAGCACTTCCCTCTGATGTTTCTGAGCTGCCATCAAGAGTGAGCTACTCATGATTA
TTCAGATGGAAACACAATCTAGCATGAGGAAAAAGTTTGTGATATTGCGGCAGAACTGGCCAGGAATTTAATAG
ATGAGGATGGCAATAACAGTGGCCCGAAGGTTTGAAGTTCCCTTTTTGATTAGTCAGCTCTCAAATGTGGGAC
TGCGGGAAGCTGCCCTTCACATTTTCTGGAACCTTCTGGAATTTTTGGGAACCAGCAACAACACTATTTAGATG
TCATCAAACGAATGTTAGTTTCTGAGTATGCAAGATCAGGAACACCCGTCGATCAGGACGTTATCTGCTAGAGCTA
CAGCTGCATTTATACTTGCAAATGAGCATAATGTTGCTCTGTTCAAACATTTTGCAGACTTGCTACCGGGATTCC
TACAGGCGGTAAATGACTCGTGCTACCAGAATGATGATTCTGTCTAAATCCCTCGTTGAGATTGCAGATACTG
TTCCAAAGTATTTGCGTCTCACTTGGGAAGCAACTCTACAGCTAAGTCTAAAGTTGTGTGGAGACACTAGCCTCA
ACAATATGCAACGCCAGCTTGCCCTTGAAGTGATCGTCAACCTCTCTGAGACTGCAGCTGCTATGTTAAGAAAAC
ATACCAATATTGTTGCACAGACTATTCTCAGATGTTAGCAATGATGGTTGATTGGAAGAAGATGAGGACTGGG
CAAATGCAGATGAAGTAGAAGATGATGATTTTGACAGCAATGCAGTTGCAGGCGAGAGTGCTCTAGATCGAATGG
CTTGCGGACTTGGTGGAAAGCTCGTTCTGCCGATGATCAAGGAACACATTATGCAAATGCTTCAAATCCTGACT
GGAAATACCGGCATGCAGGATTGATGGCCTTATCTGCCATTGGTGAAGGTGCCACCAGCAAATGGAAGGAATTC
TAAATGAGATCGTAAATTTTGTCTTACTTTTTCTCCAGGATCCTCATCCAAGAGTAAGGTATGCAGCCTGTAATG
CCGTGGGACAGATGGCTACAGATTTTGCACCTGGTTTTCCAAAAGAAATTCATGAGAAGGTGATTGCAGCTCTGC
TGCAGACCATGGAAGACCAAGGCAATCAACGTGTGCAGGCCCCATGCAGCTGCTGCCCTCATTAACTTTACTGAAG
ACTGTCCCAAGTCACTACTTATTCCATACTTGGATAATTTGGTGAAACATCTGCATTCCATTATGGTACTGAAGC
TTCAAGAGCTGATTTCAGAAAGGCACCAAGTTAGTTTTGGAACAAGTTGTGACATCCATTGCATCAGTTGCCGATA
CTGCAGAAGAAAAATTTGTCCCTACTATGATTTTATTTATGCCATCACTGAAGCACATCGTTGAGAATGCGGTTT
AAAAAGAACTGAGACTTCTGAGAGGAAAACTATTGAATGCATTAGCCTCATTGGTCTGGCTGTTGGGAAGGAAA
AATTCATGCAGGATGCATCAGATGTGATGCAGCTTTTGTAAAGACCCAGACAGACTTCAATGATATGGAAGATG
ATGATCCTCAGATCTCTTACATGATCTCAGCATGGGCCAGAATGTGCAAAATCCTTGGAAAAGAAATTCAGCAAT
ACCTTCCAGTGGTTATGGGGCCTTTAATGAAGACGGCTTCAATTAAGCCCGAAGTAGCCCTTTTAGATACCCAAG
ACATGGAGAATATGAGTGATGATGATGGTTGGGAATTTGTGAACCTTGGAGATCAGCAAAGCTTTGGTATTAAAA
CTGCAGGACTAGAAGAAAAATCAACTGCTTGCCAGATGTTGGTTTGTCTATGCTAAGGAGTTAAAGGAAGGCTTTG
TGGAGTACACCGAACAGGTTGTCAAACCTGATGGTCCCTTTACTGAAATTTTATTTCCACGATGGTGTTCGAGTGG
CAGCAGCGGAATCCATGCCTCTTCTCTGGAGTGTGCAAGAGTCCGTGGTCTGAGTATCTCACACAGATGTGGC
ATTTTATGTGTGATGCTCTAATTAAGGCCATTGGTACAGAACCAGATTTCAGACGTCTCTCAGAAATAATGCATT
CTTTTGCAAAGTGCAATGAAGTAATGGGAGATGGATGCCTTAATAATGAACACTTTGAAGAAGCTGGGAGGTATAT
TGAAAGCAAAGCTTGAAGAACATTTTAAAAATCAAGAATTACGACAAGTTAAAAAGACAAGATGAAGACTATGATG
AACAGGTGCAAGAGTCACTACAAGATGAGGATGATAATGATGTTTATATTCTGACCAAAGTGTGAGATATTTTAC
ACTCAATATTTCAGTAGCTACAAAGAAAAGGTGTTACCATGGTTTGAACAGCTGCTTCCATTAAATGTCAACCTCA
TTTGTCCACATAGACCATGGCCAGACAGACAATGGGGATTATGCATCTTTGATGATGTATAGAACACTGTAGTC
CAGCCTCATTTAAATACGCAGAAATATTTCTTAAGACCAATGCTCCAATATGTATGTGACAACAGCCCAGAAAGTCA
GGCAAGCAGCTGCATATGGCCTGGGAGTTCATGGCACAGTACGGTGGAGATAATTATCGCCCTTTTGTACAGAAG
CACTTCCCCTGCTGGTAAGAGTTATTTCAGTCTGCGGATTCTAAGACCAAAGAAAATGTCAATGCTACAGAGAACT
GCATCTCAGCAGTAGGGAAAAATCATGAAGTTCAAGCCTGACTGTGTAAACGTTGAAGAGGTCTTCCACACTGGT
TGTCTTGGCTTCCACTACATGAAGATAAAGAAGAAGCTGTTTCAGACTTTCAATTATCTGTGTGACCTGATTGAAA
GTAATCATCCAATTGTTCTTGGCCCAAACAATACCAATCTGCCCAAATATTTAGTATAATTGCGGAAGGAGAAA
TGCACGAGGCAATTAACATGAAGATCCTTGTGCCAAACGCTCTGGCCAATGTCGTTGCCAAAGTACAGACTTCTG
GAGGACTGTGGACTGAGTGCATAGCACAGCTCAGTCTGAGCAGCAGGCCGCCATTTCAGGAGCTCCTGAACTCTG
CGTGAAGGGCCTTAATGTACCCACCAGAAAATACTCCAATAAACGCTTACCCTTTCTTTAGGTTTCTTTG

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FIGURE 774B

TTTTGTTTTTGAGCAAAAGAGATCGGTAGTGTGTGTGTAGGCCATTCTTCTGGAGAGCCACAAGCAGGAAGAGC
AGCGCTGTGTTGCAGAATGGAGTTTCCATGGATTCTACCAGACCACTGAAGGAGTTCCTGGAAGCCCTGCGTAC
GTAGCACTGAAGACTATTTTTCTATTGGTATAACCCGCCACCTGAAGGGGAAAGGGAAATCAAATTAATTTTC
TCGTTAGACATAAGGAAATTTAAGGAAAAACAGCTTTAAGAACAGTTACTCAGCGTAGATGTGTGTTACACACAA
TTGCCTTGCAATTCAGTGTTCATTGTGAATTGGGAGTGTGAGTCTTCTGTAGGGTACAAAGAAGCCTCCTACCCA
GCAAACCAGTAGACCCAAAAGTTGAAAAAACTGGATGACAGACAACAAGCATGAAGATGGCATATTTGATGTCA
CTTTGGTTCTTTTTCCCAGAAGGCTTATACAGTGAAGTCACTCGGGAAGCTTTCAGCTTCAGCCCTTGAATGTGA
AGTGTCAATTGGCATGTCTGGCAGTAGTCTCTCATTCACTCCCAATAACAACATTGAATACAAAAGAGGCTTGTG
TAAAAACTCAGTACTGTCTGGCTTGGATTCAATTCATGTTTTTTAATATAAGAATGATCTAATATTTTTTTAAAG
TAATAGCTATCAGTAATAGCTGAGTGTTTTTTCCCCTAATATTTTCCTTGTGCAATTCAGACTTAAGCATCGAGT
TTTTACCATCTTCCACTTTAAGCTAAGTTATGATACCTATTCATTCAACAATTGGTGTCTTTTTAAGGTTTGCA
AATTCAGCCAATTTTGTAGCTAAGATTGTTCTGATCAGCTCAAAAAGATTGGCTTAGTGTTCATTGCAAAAT
TATAATTGCTGTAGAGCCACACACAACTTTTGAACTTTTAATTATAAGTGTATGGCTAAAGTTATTTACTGAAA
ATTCAGTAAAATGTGTGAATGTTTCTTTATGTATTAACCTCATAGCAGTAAATGACTTGCTGTTGTTAATTTT
TCTAAGGCATCTTAATAGACTTCTCTTGGAAAAACCTTCCAAGGTGTTAACATTTTTATAGTTTGTACTAAATT
TAACCGTGATATAAAAATGAATTTTATGCATAGATCAGAATTTTAAATTAAAGGTTTTTTCTTTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 775

MAAAAAEQQQFYLLLGNNLLSPDNVVRKQAEETYENIPGQSKITFLLQAIRNTTAAEEARQMAAVLLRRLLSAFD
EVYPALPSDVQTAIKSELLMI IQMETQSSMRKKVCDIAAELARNLIDEDGNNQWPEGLKFLFDSVSSQNVGLREA
ALHIFWNFPGIFGNQQQHYLDVIKRLVQCMQDQEHPSIRTL SARATAAFILANEHNVALFKHFADLLPGFLQAV
NDSCYQNDSDVLKSLVEIADTVPKYLRPHLEATLQLSLKLCGDTSLNNMQRQLALEVIVTLSETAAAMLRKHTNI
VAQTIPQMLAMMVDLEEDWDANADELEDDDDFDSNAVAGESALDRMACGLGGKLVLP MIKEHIMQMLQNPDWKYR
HAGLMALSAIGEGCHQQMEGILNEIVNFVLLFLQDPHPRVRYAACNAVGMATDFAPGFQKKFHEKVIAALLQTM
EDQGNQRVQAHAAAALINFTEDCPKSLLIPYLDNLVKHLHSIMVLKLQELIQKGTKLVLEQVVTSTIASVADTAEE
KFVPYYDLFMPSLKHIVENAVQKELRLLRGKTIECISLIGLAVGKEKFMQDASDVMQLLLKTQTD FNDMEDDDPQ
ISYMISAWARMCKILGKEFQQYLPVVMGPLMKTASIKPEVALD TQDMENMSDDDGWFEVNLGDQQSFGIKTAGL
EEKSTACQMLVCYAKELKEGFVEYTEQVVKLMVPLLKFYFHDGVRVAAAESMPLLECARVRGPEYLTQMWHFMC
DALIKAIGTEPDSVDLSEIMHSFAKCI EVMGDGCLNNEHFEELGGILKAKLEEHFKNQELRQVKRQDEDDYDEQVE
ESLQDEDDNDVYILTKVSDILHSIFSSYKEKVLPWFEQLLPLIVNLICPHRPWPD RQWGLCIFDDVIEHCSPASF
KYAEYFLRPM LQYVCDNSPEVRQAAAYGLGVMAQYGGDNYPFCTEALPLLVRVIQSADSKTKENVNATENCISA
VGKIMKFKPDCVNVEEVLPHWLSWLPLHEDKEEAVQTFNYLCDLIESNHP IVLGPNNNTNLPKIFSIIAEGEMHEA
IKHEDPCAKRLANVVRQVQTSGGLWTECIAQLSPEQQAIIQELLNSA

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FIGURE 776A

CGAAGGACCTGAAGGAAAGTGAAAAAGTCCAAAGTTTAAGATGCCAGAGATGCATTTTAAGACTCCAAAGATATC
CATGCCAGATATTGACCTGAATCTCACAGGTCCAAAAATAAAAGGAGATGTGGATGTTACAGGCCCTAAGGTAGA
GGGAGATCTGAAAGGTCCTGAAGTTGACCTCAAAGGCCCCAAAGTGACATTGATGTCCCAGATGTTAATGTTCA
GGGTCCAGACTGGCACCTGAAGATGCCCAAGATGAAAATGCCTAAGTTCAGTATGCCTGGCTTCAAAGGAGAGGG
CCCAGATGGTGGATGTGAAGCTGCCCATAGGCTGACATTGATGTCTCAGGACCAAAGTGACATTGAAGGCCCTG
ATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAAGGGCCTAAGTTCAGATGCCAGAGATGAATATCAAAGCCC
CCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAGTGAAGGGTGATGTGGATGTTTCCCTTCC
TAAAGTGGAAGGTGACCTCAAGGGCCCCAGAAGTTGACATCAAGGGCCCCAAAGTGACATTGACGCACCTGATGT
TGATGTTTCATGGCCCAGACTGGCACCTAAAGATGCCCAAGATGAAAATGCCCAAGTTCAGCATGCCTGGCTTCAA
AGCAGAGGGGCCCTGAAGCTGGAATGTGAACCTGCCCAAGGCTGACGTTGATGTCTCAGGCCCCAAAGTGATATT
AATGCCCCAGATGTGGGTGTTCAAGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCAAAGTTCAGC
ATGCCTGGCTTCAAAGGAGAGGGGCCAGATGGGGATGTGAAGCTGCCCAAGGCTGACATTGATGTCTCAGGACCC
AAAGTGACATTGAAGGCCCTGATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAAGGGCCTAAGTTCAGATG
CCAGAGATGAATATCAAAGCCCCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAG
GGTGTGTGGATGTTTCCCTTCTTAAAGTGGAAGGTGACCTCAAGGGGCCAGAAGTTGACATCAAGGGCCCCAAA
GTGGACATTGACGCACCTGATGTTGATGTTTCATGGCCCAGACTGGCACCTAAAGATGCCCAAGATAAAAAATGCC
AAGATCAGCATGCCTGGCTTCAAAGGAGAAGGTCCAGATGTGGACGTGAACCTGCCCAAGGCTGACATTGATGTC
TCAGGACCGAAAGTGATGTTGAATGTCCCGATGTGAATATCGAAGGACCTGAAGGAAAGTGGAAGGTCCAAAG
TTTAAGATGCCAGAGATGCATTTTAAGACTCCAAAGATATCCATGCCAGATATTGACCTGAATCTCACAGGTCCA
AAAATAAAAGGAGATGTGGATGTTACAGGCCCTAAGGTAGAGGGAGATCTGAAAGGTCCTGAAGTTGACCTCAA
GGCCCCAAAGTGACATTGATGTCCCAGATGTTAATGTTTCAGGTCCAGACTGGCACCTGAAGATGCCCAAGATG
AAAATGCCCAAGTTCAGCATGCCTGGCTTCAAAGCAGAGGGGCCCTGAAGTGATGTGAACCTGCCCAAGGCTGAC
GTTGATGTCTCAGGCCCCAAAGTGACGTTGAAGGCCCTGATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAA
GGGCCCCAAGTTCAGATGCCAGAGATGAATATCAAAGCCCCAAGATCCCATGCCTGACTTTGATTTGCATCTG
AAAGGTCCCAAGGTGAAGGGCGATGTGGATATTTCTCTGCCCAAGTGGAAGGTGACCTCAAGGGGCCCTGAAGTT
GACATCAGGGGTCCCAAAGTGACATTGATGTCCCGATGTGGCGTTCAAGGCCCAGACTGGCACCTAAAAATG
CCCAAAGTGAAAATGCCCAAATTCAGCATGCCTGGCTTCAAAGGAGAGGGGCCAGATGTGGATGTGAACCTGCC
AAGGCTGACCTTGATGTCTCAGGACCCAAGGTGGACATTGATGTTCCAGATGTGAATATCGAAGGCCCAGAGGGA
AAGTTGAAAGGTCCCAAATTCAAAATGCCTGAGATGAACATCAAAGCCCCCAAGATCTCCATGCCTGACATTGAT
CTTAACCTGAAAGGTCCCAAAGTGAAAGGTGACATGGATGTGTCTCTGCCAAAAGTGGAAGGTGACATGAAAGTT
CCTGACGTGGATATTAAAGGCCCCAAAGTGATATTAAATGCCCCAGATGTGGATGTTCAAGGCCCAGACTGGCAC
CTGAAGATGCCCTAAAATAAAAATGCCCAAGATCAGCATGCCTGGCTTCAAAGGAGAAGGTCCAGAAGTGACGTTG
AACCTGCCCAAGGCTGACCTTGACGTCTCAGGACCCAAGGTGGACGTTGATGTTCCAGATGTGAATATTGAAGGT
CCAGATGCCAACTGAAGGGCCCTAAATTCAAGATGCCAGAGATGAACATCAAAGCCCCCAAGATCTCCATGCCT
GACTTTGATTGTCATCTGAAAGGCCCTAAGGTGAAAGGAGATGTGGATGTTTCTCTGCCTAAGATGGAAGGTGAT
CTAAAGGGTCTGAAGTTGACATCAAGGGCCCCAAAGTGACATTAAATGCTCCAGATGTGGATGTTCAAGGCCCA
GACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAGTTCAGCATGCCTGGCTTCAAAGGAGAGGGGCCAGAT
GTGGATGTGAACCTGCCCAAGGCTGACCTTGATGTCTCAGGACCCAAGGTGGACATTGATGTTTCTGATGTGGAT
ATCCGAAGGTCCAGAAGGGGAACTGAAAGGTCCCAAATTCAGATGCCTGAGATGAGCATCCAAGCCCCCAAGAT
CTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAGGGCGATGTGGATGTTACCCTTCTTAAAGT
GGAAGGTGACCTCAAGGGGCCAGAAGCTGACATCAAGGGCCCCAAAGTGACATCAACACCCCTGATGTGGATGT
TCATGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAATTCAGCATGCCTGGCTTCAAAGGAGA
AGGTCCAGATGTGGATGTGAACCTGCCCAAGGCTGACATTGATGTCTCAGGACCCAAGTGACGTTGATGTTCC
TGATGTGAATATCGAAGGTCCAGATGCGAACTAAAGGGCCCCAAGTTCAAGATGCCTGAGATGAGCATCAAAGC
CCCCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAGGGCGATGTGGATGTTACCCT
TCTTAAAGTGGAAGGTGACCTCAAGGGGCCAGAAGCTGACATCAAGGGCCCCAAAGTGACATCAACACCCCTGA
TGTGGATGTTTCATGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAATTCAGCATGCCTGGCTT
CAAAGGAGAAGGTCCAGATGTGGATGTGAGCCTGCCCAAGGCCGACATCGATGTCTCGGGACCCAAGGTGGACGT

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FIGURE 776B

TGATATTCCAGATGTGAATATCGAAGGTCCAGACGCAAACTGAAGGGCCCCAAGTTCAAGATGCCTGAAATAAA
TATCAAAGCTCCCAAGATCTCCATACCTGATGTTGACCTGGATTTGAAAGGACCCAAAGTAAAAGGAGATTTTGA
TGTGTCGTGTCCTAAGGTTGAAGGGACTTTGAAAGGCCCAAGTAGATCTTAAAGGTCCACGTCTGGATTTCTGA
AGGCCCTGATGCCAACTCAGTGGCCCATCTTTGAAGATGCCATCGCTGGAGATATCTGCTCCTAAAGTAACTGC
TCCTGATGTTGATTTGCATCTCAAGGCACCAAAAATTGGATTTTCAGGTCCGAAGTTAGAAGGTGGTGAAGTGGG
CCTCAAGGGACCCAAAGTTGAAGCTCCAAGCTTAGATGTACACATGGACAGCCAGATATTAACATCGAAGGGCC
AGATGTTAAAATCCCCAAATTTAAGAAACCCAAAGTTTGGATTTGGGGCAAAAAGCCCCAAAGCTGACATCAAGTC
ACCTTCACTGGATGTCACTGTTTCTGAGGCAGAGCTGAACCTTGAGACTCCTGAAATTAGTGTGGTGGCAAGGG
CAAGAAAAGTAAGTTTAAAATGCCTAAAATTATATGAGTGGTCTTAAGATTAAGGCCAAAAAACAGGGATTTG
ACCTGAATGTTCTGGGGGTGAAATTGATGCCAGCCTCAAGGCTCCGGATGTAGATGTCAACATCGCAGGGCCGG
ATGCTGCACTCAAAGTCGACGTGAAATCGCCCAAAACCAAGAAAACGATGTTTGGAAAAATGTACTTCCCAGATG
TAGAGTTTGACATTAAATCACCTAAATTTAAAGCTGAGGCCCTCTCCCTAGCCCCAACTGGAGGGTGAACCTCC
AGGCACCTGATCTGGAACCTTTCTTTGCCAGCGATTACGTCGAAGGTCTTGACATCAAGGCGAAGGCTCCCAAGG
TCAAGATGCCAGATGTGGACATCTCAGTGCCAAAAATAGAGGGTGACCTGAAAGGCCCAAGTGCAGGCCAACT
TGGGTGCACCTGACATCAACATCGAAGGCCTAGATGCTAAAAGTCAAAACACCGTCTTTCGGCATTCTGCCCCCTC
AAGTCTCCATCCCTGATGTGAATGTAACTTGAAAGGACCAAGATAAAGGGTGATGTCCCAGCGTGGGACTGG
AAGGACCAGATGTAGATCTGCAAGGTCCAGAAGCAAAAATTAAGTTCCCAAGTTTTCCATGCCCAAGATCGGCA
TCCCAGGTGTGAAAATGGAGGGTGGGGGAGCCGAGGTCCATGCCAGCTACCCTCTCTTGAAGGAGACTTGAGAG
GACCAGATGTTAAGCTCGAAGGGCCCGATGTTTCTCTAAAGGGGCCAGGAGTAGACTTGCTTTCAGTGAACCTCT
CTATGCCAAAAGTCTCTGGGCCTGACCTTGATCTGAACTTGAAAGGACCAAGTTTGAAGGGAGACCTGGATGCAT
CTGTTCCCAGCATGAAGGTGCATGCTCCAGGGCTCAACCTCAGTGGTGTGCGGTGGCAAAAATGCAGGTGGGAGGAG
ACGGTGTGAAAGTGCCAGGGATCGATGCCACAACAAAGCTTAACGTTGGGGCACCAGATGTGACACTGAGGGGAC
CAAGCCTGCAGGGAGATCTGGCTGTCTCTGGTGACATCAAATGCCCTAAAGTATCCGTAGGAGCTCCTGATCTAA
GCTTGAGGCATCCGAAGGCAGCATTAAACTTCCCAAAATGAAGCTGCCCAATTTGGCATCTCTACTCCGGGGT
CCGACTTGACAGTCAATGCCAAGGGGCCACAGGTTTCTGGCGAACTGAAGGGGCCAGGTGTGGATGTGAACCTGA
AAGGGCCTCGGATTTAGCACCAGATGTGGACTTTAACTTGGAAGGACCAAAAGTGAAGGGAGCCTTGGGGCCA
CTGGTGAGATCAAAGGCCCACTGTGCGAGGAGGTCTTCCAGGCATTGGTGTTCAGGCCTAGAAGGAAACCTCC
AGATGCCTGGAATTAAGTCCTCTGGATGTGATGTGAACCTGCCAGGCGTGAATGTGAACTCCCAACTGGGCAGA
TTTCTGGGCCTGAAATCAAAGGTGGTCTGAAAGGTTTCAAGAGTAGGTTTCCATGGGGCTGCTCCTGATATCAGTG
TGAAGGGGCCCTGCCTTTAATATGGCATCTCTGAGTCAGATTTTGGCATCAACTTGAAGGGGCCAAAAATCAAAG
GAGGTGCGGATGTTTCAAGGGGTGTGAGTGCCCCAGACATCAGCCTTGGTGAAGGGCATTGAGTGTAAAGGTT
CCGGGGGTGAGTGAAGGGACCCCAAGTCTCCTCTGCTCTCAACTTGACACATCTAAGTTTGTGGGGGCCCTTC
ATTTCTCAGGACCAAGGTGGAAGGAGGTGTGAAAGGAGGTGAGATTGGACTCCAGGCTCCTGGGCTGAGTGTGT
CTGGGCCTCAAGGTCACTTGGAAGTGGATCTGGAAAAGTAACATTCCCTAAAATGAAGATCCCCAAATTTACCT
TCTCTGGCCGTGAGCTGGTTGGCAGAGAAATGGGGGTGGATGTTCACTTCCCTAAAGCAGAGGCCAGCATCCAAG
CTGGTGCTGGAGACGGCGAGTGGGAAGAGTCTGAAGTCAAAGTGAAGAAAGTCCAAGATCAAATGCCCAAGTTTA
ATTTTCCAAACCTAAAGGGAAAGGTGGTGTCACTGGCTCACCAGAAGCATCAATTTCTGGGTCCAAGGTGACC
TGAAAAGTTCAAAGGCCAGCCTGGGCTCTCTGGAAGGAGAGGCAGAGGCCGAAGCCTCTTACCAGAAAGGCAAA
TCTCCTTATTTAAAAGTAAGAAGCCACGGCACCGCTCAAATTCATTGAGTGAAGAGAGTCTCTGACCTT
CCACCCCGACGGGGACGCTGGAGTTTGAAGGTGGGGAAAGTGTCTCTGGAAGGTGGGAAAGTTAAAGGGAAACAG
GGAAGCTGAAATTCGGTACCTTTGGTGGATTGGGGTCAAAGAGCAAAGGTCAATTATGAGGTGACTGGGAGCGATG
ATGAGACAGGCAAGTTACAGGGGAGTGGGGTGTCCCTGGCCTCTAAGAAGTCCCGACTGTCTCTCTCTTAGCA
ATGACAGTGGGAATAAGGTTGGCATCCAGCTTCCCAGGTGGAGCTGTGAGTTCCACAAAGAAAGAGTAGCAGG
CCTTTGTATGTGTGTACATATATATATATAACAAAACATCAGCCTTGGGTGGTGTGTTTCTATATAAACTCCA
AAGGGAAACACACCGACTGCCTCAGCAATCATGCAAAGACCTTGCTGGCCCGGTGGCAAGCGCTGAAAACCGA
CCGCCTGTAGGCTCCTGGAACATATACAGATAGGTAAAGAGTTCCAAGTTCGTCCAGCCCATGTGCAAAGTCAACA
GTATTTGCCTTAAGATTTATATATATATATATTTTTTGCATTGACTGCTGAGAGCTCCTGTTTACTAAGCAAGCT
TTTGTGTTTATTATCTCATTTTTTACTGAACATTGTTAGTTTTTGGGGTAATGGAAACCCACTTTTTTCATTGTAAT

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FIGURE 776C

GACTTTGGGGGCTTTTGTAGTAAGGGTGGGTGGGGTGATGGGTTGCAGACGGAGGTCAGGTCTTCCTCTTTCCT
GAGACTGGATCTGTTCAAACAGCAAACGCCCACAGATGGCCCAGAGGTGGTGGTAGTCAGGGTGTGTGGGTGTTT
TTAGGGTTCTTTAGTGTTGTTTCTTTCACCCAGGGGTGGTGGTCCCAGCCAGTTTGGTGCTGACGGTGAGAGGAA
ATTAGAATCTGTTTGCAAATTGTCCAACCCACCCCTCAACATGAGGGGCTTCCATTTTCTGTGTTTTGTAAGGG
AACTGTTTCCTTCATGCCGCCATGTTCTGATATTAGTTCTGATTTCTTTTAAACAAATGTTATCATGATTAAGA
AAATTTCCAGCACTTTAATGGCCAATTAAGTGAAGAAATTGATGCTGTACAAGGCAAATAAAGCTGT
TTATTAACCTCCGAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCA

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FIGURE 777

MPKVKMPKFSMPGFKGEGPDGDVCLKPKADIDVSGPKVDIEGPDVNIIEGPEGKLGPKFKMPEMNIKAPKISMPDI
DLNLKGPKVKGDVDVSLPKVEGDLKGPEVDIKGPKVDIDAPDVDVHGPDPWHLKMPKIKMPKISMPGFKGEGPDVD
VNLPKADIDVSGPKVDVECPDVNIIEGPEGKWKSPKFKMPEMHFKTPKISMPDIDLNLTGPKIKGDVDVTGPKVEG
DLKGPEVDLKGPKVDIDVPDVNVQGPDPWHLKMPKMKMPKFSMPGFKAEGPEVDVNLPKADVDVSGPKVDVEGPDV
NIIEGPEGKLGPKFKMPEMNIKAPKIPMPDFDLHLKGPKVKGDVDISLPKVEGDLKGPEVDIRGPKVDIDVPDVG
VQGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADLDVSGPKVDIDVPDVNIIEGPEGKLGPKFKMPEMNIK
APKISMPDIDLNLKGPKVKGDMVSLPKVEGDMKVPDVIDKGPKVDINAPDVDVQGPDPWHLKMPKIKMPKISMPG
FKGEGPEVDVNLPKADLDVSGPKVDVDVPDVNIIEGPDALKGPKFKMPEMNIKAPKISMPDFDLHLKGPKVKGDV
DVSLPKMEGDLKGPEVDIKGPKVDINAPDVDVQGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADLDVSGP
KVDIDVPDVIDRRSRRETERSQIQDAEMSIQAPKISMPDIDLNLKGPKVKGDVDVTLPKVEGDLKGPEADIKGPK
VDINTPDVDVHGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADIDVSGPKVDVDVPDVNIIEGPDALKGPK
FKMPEMSIKAPKISMPDIDLNLKGPKVKGDVDVTLPKVEGDLKGPEADIKGPKVDINTPDVDVHGPDPWHLKMPKV
KMPKFSMPGFKGEGPDVDVSLPKADIDVSGPKVDVDIPDVNIIEGPDALKGPKFKMPEINIKAPKISIPDVDLDL
KGPKVKGDFDVSPKVEGTLKGPEVDLKGPRLDIEGPDALKSGPSLKMPSEISAPKVTAPDVDLHLKAPKIGFS
GPKLEGGEVDLKGPKVEAPSLDVHMDSPDINIEGPDVKIPKFKPKFGFGAKSPKADIKSPSLDVTVPEAEINLE
TPEISVGGKGKSKFKMPKIHMSGPKIKAKKTGIDLNVPGGEIDASLKAPDVDVNIAGPDAALKVDVKSPKTKKT
MFGKMYFPDVEFDIKSPKFKAAPLSPKLEGELOAPDLELSLPAIHVEGLDIKAKAPVKMPDVIDSVPKIEGD
LKGPKVQANLGAAPDINIEGLDAKVKTPSFGISAPQVSIPDVNVNLKGPKIKGDVPSVLEGPVDLQGPPEAKIKF
PKFSMPKIGIPGVKMEGGGAEVHAQLPSLEGDLRGPDKLEGPDVSLKGPGVDLPSVNL SMPKVS GPDLDLNLKG
PSLKGDLASVPSMKVHAPGLNLSGVGGKMVGVDGKVPIDATTKLNVGAPDVTLRGPSLQGD LAVSGDIKCP
KVS VGAPDLSLEASEGSIKLPKMKLPQFGISTPGSDLHVNAKGPQVSGELKGPVDVNLKGPRISAPNVDFNLEG
PKVKGSLGATGEIKGPTVGGGLPGIGVQGLEGNLQMPGIKSSGCDVNLPGVNVKLPTGQISGPEIKGGLKGSEVG
FHGAAPDISVKGPAFNMA SPESDFGINLKGPKIKGGADVSGVSAPDISLGEHLSVKSGSGEWKGPQVSSALNL
DTSKFAGGLHFSGPKVEGGVKGGQIGLQAPGLSVSGPQGHLES GSKVTFPKMKIPKFTTSGRELVGREMGVDVH
FPKAEASIQAGAGDGEWEESEVKLKKSKIKMPKFNFSKPKGKGVTGSPEASISGSKGDLKSSKASLSLEGEAE
AEASSPKGKFSLFKSKKPRHRSNSFSDEREFSGPSTPTGTLEFEGGEVSLEGGKVKKGKGLKFGTGGGLGSKSK
GHYEVTGSDDDETGLQSGSVSLASKKSRLSSSSSSNDSGNKVGIQLPEVELSVSTKKE

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FIGURE 778

GTGCGGTTGGGAACGCGGAGCGGACGGATTTCGATTCAACGGGGTTCCGGACCGCGCTGCGCTATGGAGCAGGTCA
ATGAGCTGAAGGAGAAAGGCAACAAGGCCCTGAGCGTGGGTAACATCGATGATGCCTTACAGTGCTACTCCGAAG
CTATTAAGCTGGATCCCCACAACCACGTGCTGTACAGCAACCGTTCTGCTGCCTATGCCAAGAAAGGAGACTACC
AGAAGGCTTATGAGGATGGCTGCAAGACTGTGACCTAAAGCCTGACTGGGGCAAGGGCTATTACGAAAAGCAG
CAGCTCTAGAGTTCTTAAACCGCTTTGAAGAAGCCAAGCGAACCTATGAGGAGGGCTTAAACACGAGGCAAATA
ACCCCTCAACTGAAAGAGGGGTTTACAGAATATGGAGGCCAGGTTGGCAGAGAGAAAATTTCATGAACCCCTTCAACA
TGCCTAATCTGTATCAGAAGTTGGAGAGTGATCCCAGGACAAGGACACTACTCAGTGATCCTACCTACCGGGAGC
TGATAGAGCAGCTACGAAACAAGCCTTCTGACCTGGGCACGAACTACAAGATCCCCGGATCATGACCACTCTCA
GCGTCTCCTTGGGGTTCGATCTGGGCAGTATGGATGAGGAGGAAGAGATTGCAACACCTCCACCACCACCCCTC
CCAAAAGGAGACCAAGCCAGAGCCAATGGAAGAAGATCTTCCAGAGAATAAGAAGCAGGCACTGAAAGAAAAAG
AGCTGGGGAACGATGCCTACAAGAAGAAAGACTTTGACACAGCCTTGAAGCATTACGACAAAGCCAAGGAGCTGG
ACCCCACTAACATGACTTACATTACCAATCAAGCAGCGGTATACTTTGAAAAGGGCGACTACAATAAGTGCCGGG
AGCTTTGTGAGAAGGCCATTGAAGTGGGAGAGAAAACCGAGAAGACTATCGACAGATTGCCAAAGCATATGCTC
GAATTGGCAACTCCTACTTCAAAGAAGAAAAGTACAAGGATGCCATCCATTTCTATAACAAGTCTCTGGCAGAGC
ACCGAACCCAGATGTGCTCAAGAAATGCCAGCAGGCAGAGAAAATCCTGAAGGAGCAAGAGCGGCTGGCCTACA
TAAACCCCGACCTGGCTTTGGAGGAGAAGAACAAGGCAACGAGTGTTTTTCAGAAAGGGGACTATCCCCAGGCCA
TGAAGCATTATACAGAAGCCATCAAAAGGAACCCGAAAGATGCCAAATTATACAGCAATCGAGCTGCCTGCTACA
CCAACTCCTGGAGTTCCAGCTGGCACTCAAGGACTGTGAGGAATGTATCCAGCTGGAGCCGACCTTCATCAAGG
GTTATACACGGAAAGCCGCTGCGCTGGAAGCGATGAAGGACTACACCAAAGCCATGGATGTGTACCAGAAAGCGC
TAGACCTGGACTCCAGCTGTAAGGAGGCGGCAGACGGCTACCAGCGCTGTATGATGGCGCAGTACAACCGGCACG
ACAGCCCCGAAGATGTGAAGCGACGAGCCATGGCCGACCCTGAGGTGCAGCAGATCATGAGTGACCCAGCCATGC
GCCTTATCCTGGAACAGATGCAGAAGGACCCCCAGGCACTCAGCGAACACTTAAAGAATCCTGTAATAGCACAGA
AGATCCAGAAGCTGATGGATGTGGGTCTGATTGCAATTCGGTGATGACTTGTTTCATCCCCCTTCCCTTCGCCCT
CATGTGGAAGAGGAGCTGGGACCGCGGCGAGCAGCACGGAGCGGAAGGGAGAGCAGGGGAGAGAAGGCCTCATC
TCTCTATATTTATACATAACCCCGGGGAAGACACAGAGACTCGTACCTGCGCTGTTTGTGCCGCGCTGCCTCTG
GGCCCTCCAGCACACGCATGGTCTCTTACCGCTGCCCTCGAGTTCATGTCTCTTCCCTGCCCTAGTTGC
TGTCTCGGCTGCTCTCCCATAGTTGGTTTTTTTTTTTATTGGGGCAGTGGGCATGTTATGGGGAGGGGAGGGGGT
TCTTCCAGCCTCAGGTCCCAGCTGTCTACGTTGTTTATTCTGCGTCCCCTTCTCCAATAAAACAAGCCAGTTGG
GCGTGGTTATAAC

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FIGURE 779

MEQVNELKEKGNKALSVGNIDDALQCYSEAIKLDPHNHVLYSNRSAAYAKKGDYQKAYEDGCKTVDLKPDWGKGY
SRKAAALEFLNRFEEAKRTYEEGLKHEANNPQLKEGLQNMEARLAERKFMNPFNMPNLYQKLESDPRTRTLLSDP
TYRELIEQLRNKPSDLGTLQDPRIMTTLSVLLGVDLGSMDEEEEIATPPPPPPPKKETKPEPMEEDLPENKKQA
LKEKELGNDAYKKKDFDTALKHYDKAKELDPTNMTYITNQAAVYFEKGDYNKCRELCEKAIEVGRENREDYRQIA
KAYARIGNSYFKEEKYKDAIHFYNKSLAEHRTPDVLKKCQQA EKILKEQERLAYINPD LALEEKNGNECFQKGD
YPQAMKHYTEAIKRNP KDAKLYSNRAACYTKLLEFQLALKDCEECIQLEPTFIKGYTRKAAALEAMKDYTKAMDV
YQKALDLDSSCKEAADGYQRCMMAQYNRHDSPEDEVKRRAMADPEVQQIMSDPAMRLILEQMOKDPQALSEHLKNP
VIAQKIQKLMDVGLIAIR

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FIGURE 780

GCTAGATGAGACTGAAGAGTCTTCTTTACTTTAAGTGATTGATTTCAATTTAGGACTCCTTGTGGGTTTTTTGTAA
AAAGCCATTAAACCATTTCCTGCCCCTGATCTCCATATCAGCCTTTATATATATTTCATTGTCTCTCAACAGCCCC
AATTTTTTTTATTTAACAGATGGGGAACAGAGGCTCTGAGCGGTTAACAAAGCTTTCTTTCTGTGGAAACCTAGTA
AATGGCAAAGCTGGAATATGAAACTGCAAAGCCTATGTGCTTAAGTAGTAAACCCAACCACCTGGGACCACCATA
TCTTACTGTGCAGTTTGTGTGTGTGAGGGGATCAGAACATCTAAGAACTGCCATTACGTTGAGGACAACATA
GGGATTTATATATTAATACATGCTGGTGTAAATACAGGCCGGTGTCTGTAAATATTAGTATATTAGGACAGTTTG
CCATACCATAGGGGAAAAGCCACTTTATTCTAATTCACCCAAAGGTACTGTAAGTGCTGATGGCTCTGGGTCTGT
CTTTCTGTCAAGTTGCCAAGTCACATAAGTAATGAATCCGCAGCTGGAGGAGCTGCTGCTGGAGGACAGGCATGT
TTTCAGACAGGAGCATGGCCCTTTAGCTCATGACCATAAGAGGGCGCTACAGCAAAGAGTACTAAATACCAATCAA
AGTGAGCTCAGAGTACAAGAGGGTAACTTGCTTTTCTCCAAAGTAAAAGAGAAGACATAGTCTCAAACACTTGC
CCTGTGCCCTGTCCCTGAACCTCTCCATGGAGGAATTTTTTCTGTTGTTTAGTGTAGCAGAATTTAGGAAGGGCT
TGTAATAAGGAAGGTTGAGGGTTGGGTGGGGTGCACACTGTGTTGTGTGAGGATCATTTTCATGTTAATGAAATGT
TTAGTTCTTTAAGGGGAATGTGGTAGAGCCTTTATCTCCCCCTGCCCTTTTTTTTAACTGCACAGGCTCTGGCA
CAATGTTTATTGTGTCATAATAACCAAGAAATGGGTTTCTACAAAAGATGCAAAGACTGTGCTTCTGGAATTCC
CTACCACAGCGAGGTCCCTGTGAGTTTGAAAGAAGCTGTCTGCGAAGTGGCCCTTGATTACAAAAAGAAGAAACA
CGTATTCAAGCTAAGACTAAATGATGGCAATGAGTACCTCTTCCAAGCCAAAGACGATGAGGAAATGAACACATG
GATCAAGGAAAAATTACTGCAGTTGACGGAAGAGGAAAGAAATGATCGGTCCTTACAGCCGCTCGTCAGACTC
CAGCAACCTGGGATGAGAGGTTCTCTGCCCTGGAAGGCTGACTACATTGGAGTTACTGGAAGTGCGCAGACAGC
AAGAGGAAGAGGAGAGGAAGAGGCGGCCCTTCTCCCGAGCCGAGCACGAAGGTTTCAGAGGAAGCCGAGTCCC
AGCAGCAGTGGGATACTTCAAAGGAGAACAAGTTTCCCCAAACGGTTTGCCAGCTGAACAGGGATCTCCACGGA
TGGCAGAAACGGTGGACACAAGCGAAATGGTCAACGGCGCTACAGAACAAGGACGAGCTCTAAAGAGTCCAGCC
CCATCCCCCTCCCCGACCTCTGATCGTAAAGCCAAGACTGCCCTCCCAGCCCAGAGTGCCGCCACCTTACCAGCCA
GAACCCAGGAGACACCTTCGGCCCAGATGGAAGGCTTCTCTCAATCGGAAACACGAGTGGGAGGCCACAATAAGA
AAGCCTCAAGCAGGTCCTGGCACAATGTTTATTGTGTGTCATAATAACCAAGAAATGGGTTTCTACAAAGATGCAA
AGACTGCTGCTTCTGGAATTCCCTACCACAGCGAGGTCCTGTGAGTTTGAAAGAAGCTGTCTGCGAAGTGGCCC
TTGATTACAAAAAGAAGAAACACGTATTCAAGCTAAGACTAAATGATGGCATGAGTACCTCTTCCAAGCCAAAGA
CAAAGAGAACC GGTTTCAGCCTTTTTGGCCAAAAGAAATGAAGTCTCTTCCCTTCACTTCTGCCCCTTCTCTTACC
CTTTTCAGTGAAATTCCTCGCATGCAAGCTCAGAACCCACACAGTACTCTCTGTGCCCAAAGTTCGCCCAAAGTGGTT
GAANNNNNNNNNNNNNNNNNNNNNAGAGCATTTCGGGGGGGGTGGGGGAAACACACCTAAACACTTTATCTCCCA
GTTACCAAAGTTTGAGGTGCAGAGGGAAGGCCAGATTTTTTTTTTAATGAAATTATATAGATTAGATCTCAGTAT
TTAAACTGTTCCCTCAATTTTGTGAGGCTGTGTTGGAAATAACCCGCTCTAGTGCTGTTGGTATGCAAGGCAGCG
GTGCTTAATCAATATTTCTGTGCTCACCAGAGGCCAAATGTACCAATATCCTGACACCATTCTCTCTCCATTTA
CTTCTTGGTGGTTACCCTGACTCTTGACTCTTAGAAGTGCCGAGATGGGGCTAACCTTTATTAAACAGATCGCA
TATTATGATCTTGCTGCAGCCACAGTGCAGCTCCACATTAAGTCTACAGACCAAACCATTTGTATCTGGCATCAC
TTACTAACACACGACATGCGGCTTTTCTGCATCAACTGCTATGACGGTTAAGAATGTCAGTATACAAGAAGGAAT
AGAAAAGTATACTGTTTTAAATAATCTGTAATTTCAATTTTTTTTTTTTTGCTGAAATACATTATATTGTACGT
TTGAGATAATTCTAGTACAAAGTATAATAAACTAGATGTATAATAAACCTTTAAATCATTTGGTAAGTGTACAA
GTGGTGGAACTGAAGCATTACTGGACAAAGTAATGTTACTCTAATGGTTACTTGCTCGTGCGTTGCCACACTG
TGTTATAATTTGCTTCATTTCTTGCTATTTGATACATAGTGTGCAATTTCTCTGTCACTGTAAGTATTGTAATGA
CAAATTTTCATCTTACTGCACAATCAAATGACATTGATAGGAATGAAGTCCAGAGGCTGGGCTGAACAGGGAG
GTGGTCGCTCAGGCCTGGTGCTCAGTCGTACGACCTGTACCTCTCAACTTTTGCCCTATCTGTTAAATATATGCT
ATGTCATTAAATGCTTTTTAAATCTAGCACGGTGACTAGTTGTTGTTCTTCTCTGCTGCGTGTGCATGCCAGTA
GGGAAACTGCAAAGGGAGAAATGACAAACAAGAAACATTTTACAACAGTCTGGGCTCACTTTTGCAATTTTTAT
GCATGTCTGGTGCACAAGCTTTGAAAAGTACAGCAAACAGTAATAAATGTGACTGTTTTGTAGT

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FIGURE 781

MAETVDTSEMVNGATEQRTSSKESPIPSPTSDRKAKTALPAQSAATLPARTQETPSAQMEGFLNRKHEWEAHNK
KASSRSWHNVYCVINNQEMGFYKDAKTAASGIPYHSEVPVSLKEAVCEVALDYKKKKHVFKLRLNDGMSTSSKPK
TKRTGSAFLAKKK

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FIGURE 782A

CGCGTGTCTACGCGGACGCACCGGCTAAGCTGCTTCTGCGCGCCGCGCCGCTGGGACCTTGCGGTGAGGCTGC
GCGGGGCGGAGGCCGCTCCGAGCGCCAGGTTTATTAGTCACCATGAAGCTGCTGCTGCTGCACCCGGCCTTCC
AGAGCTGCCTCCTGCTGACCCTGCTTGGCTTATGGAGAACCACCCCTGAGGCTCACGCTTCATCCCTGGGTGCAC
CAGCTATCAGCGCTGCCTCCTTCTGCAGGATCTAATACATCGGTATGGCGAGGGTGACAGCCTCACTCTGCAGC
AGCTGAAGGCCCTGCTCAACCACCTGGATGTGGGAGTGGGCCGGGGTAATGTCACCCAGCAGCTGCAAGGACACA
GGAACCTCTCCACGTGCTTTAGTTCTGGAGACCTCTTCACTGCCCACAATTTAGCGAGCAGTCGCGGATTGGGA
GCAGCGAGCTCCAGGAGTTCTGCCCCACCATCCTCCAGCAGCTGGATTCCCGGGCCTGCACCTCGGAGAACCAGG
AAAACGAGGAGAATGAGCAGACGGAGGAGGGGGCGGCCAAGCGCTGTTGAAGTGTGGGGATACGGTCTCCTCTGTG
TGACCGTCATCTCCCTCTGCTCCCTCCTGGGGGCCAGCGTGGTGCCCTTCATGAAGAAGACCTTTTACAAGAGGC
TGCTGCTCTACTTCATAGCTCTGGCGATTGGAACCTCTACTCCAACGCCCTCTTCCAGCTCATCCCGGAGGCAT
TTGGTTTCAACCCTCTGGAAGATTATTATGTCTCCAAGTCTGCAGTGGTGTGTTGGGGGCTTTTATCTTTTCTTTT
TCACAGAGAAGATCTTGAAGATTCTTCTTAAGCAGAAAAATGAGCATCATCATGGACACAGCCATTATGCCTCTG
AGTCGCTTCCCTCCAAGAAGGACCAGGAGGAGGGGGTGATGGAGAAGCTGCAGAACGGGGACCTGGACCACATGA
TTCTCTCAGCACTGCAGCAGTGAGCTGGACGGCAAGGCGCCCATGGTGGACGAGAAGGTCATTGTGGGCTCGCTCT
CTGTGCAGGACCTGCAGGCTTCCAGAGTGCTTGCTACTGGCTGAAAGGTGTCCGCTACTCTGATATCGGCACTC
TGGCCTGGATGATCACTCTGAGCGACGGCCTCCACAATTTTCATCGATGGCTGGCCATCGGTGCTTCCTTCACTG
TGTCAGTTTTTCCAAGGCATCAGCACCTCGGTGGCCATCCTCTGTGAGGAGTCCACATGAGCTAGGAGACTTTG
TCATCCTGCTCAACGCTGGGATGAGCATCCAACAAGCTCTCTTCTTCAACTCCTTTCTGCCTGCTGCTGCTACC
TGGGCTGCGCCTTTGGCATCCTGGCCGGCAGCCACTTCTCTGCCAACTGGATTTTTGCGCTAGCTGGAGGAATGT
TCTTGATATATTTCTCTGGCTGATATGTTCCCTGAGATGAATGAGGTCTGTCAAGAGGATGAAAGGAAGGGCAGCA
TCTTGATTCCATTTATCATCCAGAACCTGGGCCTCCTGACTGGATTACCATCATGGTGGTCTCACCATGTATT
CAGGACAGATCCAGATTGGGTAGGGCTCTGCCAAGAGCCTGTGGGACTGGAAGTCGGGGCCTGGGCTGCCCGATC
GCCAGCCCCGAGGACTTACCATCCACAATGCACCACGGAAGAGGCCGTTCATGAAAACTGACACAGACTGTATT
CCTGCATTCAAATGTCAGCCGTTTGTAAATGCTGTATCCTAGGAATAAGCTGCCCTGGTAACCAGTCTCTAGCT
AGTGCCCTCTTGCCCTCTCCTCACCTCCTTTTCTCTCAGTGACTCTGGAACCTGAATGCAGCTTACAAGACAAGCC
TGACTTTTTTCTCTGATTACCTTGGCCTCCTCTTGGAACCAAGTGTGAAAGGTTTTGAATCCTTTACCCAACAAT
GCAAAAATAGAGCCAATGGTTATAACTTGGCTAGAAATATCAAGAGTTGAATCCATAGTGTGGGGCCCATGACTC
TAGCTGGGCACCTTGGACCTCCAGCTGGCCAATAGAAGAGACAGGAGACAGGAAGCCTTCCCATTTTTTCAAAGT
CTGTTTAATTGCCTATTACTTCTCTCAAAGAGAACCTGAAGTCAGAACACATGAGCAGGGTGAGAGGTGAGGCAA
GGTTCATCCTGAATGGGAGAGGAAGTCAACCACTGCTGTGTGTCTTGTGTCAGGATGCTCATTGTTCTACTGAG
ATGCTGGATATTGATTTTGTAAACAGCACCTGGTGTTCACGGCTGTCCGAGTGAGCTAACGTGGCGGTGTGGCTG
CCTGGACCTCCTCTTTCAGGTTAACGCTGACAGAATGGAGGCTCAGGCTGTCTGCAAGAAAACAGTTGGTTTTGGC
TGTGATTTTGACCTCCTCTTCCCCACTGCCATCTTCTAAGAGACTTTGTAGCTGCCTCCTAGAAGCACATTCTGA
GCACATTTGAGACCTCTGTGTTAGAGGGGAGACTGCACAACTATCCTCCCCCAGGTTGAGACGTCTGCAGAGTG
GCAAGCTGACTTGTAGAAATGGGGTGCCATTTATGCTCTACTTAGACAAGGGTAATCAGAAATGGAATCAGTGCA
GGCAAAATTTAGGATTTGCCGCTTCCATAAATCAAAGCATGACTAATAGGGGGTCTCTGAAATGTAAGGGCACAA
ACTTCACTTAGGGCATCGCAGATGTTTGCAGAATGGTTGGCCTAATGATTATGCTACAGATGGGTTTTAAATGAC
CCGTCTAGGTTACTGCTTCCTTGCAAAAAAAGTCGAATCCTGCATTGAATTGAATATGAATTTCTCTAACTCTCT
CCAGAAAATGGATGGAGATAACTTGTCTTTAAACTGTAGGCCAGCCTTAGCCACTGTGGAGCCCTTGCCCTCCGA
GCTCTGGCTTCAAGGGGAGCTCTTCTCCAGGTTCACTAGGTGAATTGATTTATTATTATCATATTGATAATGTGA
GATTTCTTTAGCCACTTTGGGGAGCCTGTCTCTCCAGAAGCCTTTCTTAGTGGTGCCACAGTTGGAGCCCAGGGG
CCATGTTTGCAAACTGATTCATGTGCATGGCTGACAGGAGTACTGGTTCACTACCAATGCCTGAGCTTTTCTCTT
ACATAGAAAACTGTCCACTCTCAGTAATCACAAGCAGCATCCGTTTTGTTTTCTCTTCTTGGGAGACATCTGTC
AAACCAGGAATATTCTTGAAAAGAACGTGAGCAGGAAAACTGCTGGTGATACTTTTTTTAAGTTTTGTTTTAT
CTTGCCCTGTTGGCTTCAATACATTGAGAATACGCTGAAGAGGGAAAAATTCAGTGATGGAGATTCTAGATTAA
TATCAGGACTGATTTCTGGTGGGATTATGGTCCAGTTTTACCAAAGAACCAATTCCTTGAATGTGGAATCTAA
CTTTTTATATTGTCAATTATTATTGTTGTTTTTAAACGGTCTTTGTCTTTTCTGTTTTATTTTCTCAAGCTGCT
TTCAGGAGCTAGCAGAAAAATACTCAAAGTTGAAGACTCTGGAAGATTTTGCTTTAACCTAACTCGCATTGATGT

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FIGURE 782B

ATTAAATTTATAATTTTAGCATTCCAATAGATCCTATCATTCCCTTAAACATAATACCCTTTGTCTTGGAGTAGA
ATACTAAGTTAGAGTTAGTGGATTTCTAGTTTAGGAGAGGAGCTCAAAACTATAATCTTTAACAAATTGAAAAAT
GAAATAGGGTGTTCCTTTTGTGCACACCTATATTACCTTAAGAAATTTCCCTCCATAGACAGCTGCCTCAA
AGGGAAATCCTCTTTAAACCGTAGTTGGCGCAGAGGTCAGTCCTAGTCGGAGCTTAGGAGGGGCGGAGACGCTCA
CATCGTCTGACTTGAGTCGCCACTGATTGTGGCAACAGCTTTGCCTCATGAGTCAAAAATTGGCAATTTCTTTTG
ATTTTAGTTGTTGAATTTGCTGTTTCAAGCATTTGTACATATTAGAAGTCTAAGGAGTAGCAAGTCAGTGGGAG
GACTTTTTCACCCCTGGCATTAGCAGCTTCGACCTCATTTTCCAGATGCACCAGCTCCTATTAATAAGTTAGCAA
GGAAAGTGTATGTCACGTGCAGGAACAGTGAGGCAGGGACAGGGGTTCGTCTCCTTCTCACTTCACCACCGGCAC
ACAGCTTGCCCCGTGCTTTGCCCCCAAAGGTATTTTGTGTCTAGTGTCAAATTGGAGCTATTCTTCACTGGTCCCT
TAACCTTGGGTTTTAAAAAGAAGGCTTCTCTGTTTGGGTAGCGTAAGAGCTGAGTATAGTAAGTCCTCTTCCAAA
GAGATGGCAATATGCTGGGCATCTACTTTAAACAAAGTTGTCTGATTTTGAAGAGAGGTTAGGATTTTATTG
TTCTTATTTCCCTTTACAGTTCTGCAGTTCCATCACAGTATTTTTTAAATAACTCAGGTGTATGAGCAGAAATT
AGAAAAGAAAATTAACCTTATGTGGACTGTAAATGTTTTATTTGTAAGATTCTATAAATAAGCTATATTCTGT

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FIGURE 783

RVYADAPAKLLLPPPAAWDLAVRLRGAEAAASERQVYSVTMKLLLLHPAFQSCLLLLTLLGLWRTTPEAHASSLGAP
AISAASFLQDLIHRYGEGDSLTLQQLKALLNHLDVGVGRGNVTQHVQGHRNLSTCFSSGDLFTAHNFSEQSRIGS
SELQEF CPTILQQLDSRACTSENQENEENEQTEEGRPSAVEVWGYGLLCVTVISLCSLLGASVVPFMKKTIFYKRL
LLYFIALAIGTLYSNALFQLIPEAFGFNPLEDYVSKSAVVFGGFYLFFFTEKILKILLKQKNEHHHGHSHYASE
SLPSKKDQEEGVMEKLQNGDLDMIPQHCSSELDGKAPMVDEKVIVGSLSVQDLQASQSACYWLKGVRYSDIGTL
AWMITLSDGLHNFIDGLAIGASFTVSVFQGISVAILCEEFPHELGD FVILLNAGMSIQQALFFNFLSACCCYL
GLAFGILAGSHFSANWIFALAGGMFLYISLADMFPFMNEVCQEDERKGSILIPFI IQNLGLLTGFTIMVVLTMYS
GQIQIG

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FIGURE 784

GAATTCGGCACGAGCGAGTCGCGACGTCGTCGGCAAGCGGCCCTTCCACGTAACGCGCGCCGGCGGGGGAGGG
CGTTGGCGCGGAGCCGACGGGAACGTCCGCGCTGCGGAGCAGGGCAGGGAAGCCGGGAGGCGGGCCCGGCCGAG
CTTGTCCTTGTCGCGCAGGTACTCCGAGCACTATGTCGTCCCCGGCGTCGACCCGAGCCGCCGCGGCAGCCGGC
GTGGAAGGGCCACCCCGCCAGACGCCTCGGAGTGAGGATGCCAGGTCATCTCCCTCTCAGAGACGTAGAGGCG
AGGATTCCACCTCCACGGGGGAGTTGCAGCCGATGCCAACCTCGCCTGGAGTGGACCTGCAGAGCACTGCTGCGC
AGGACGTGCTGTTTTCCAGCCCTCCCCAAATGCATTCTTCAGCTATCCCTCTTGACTTTGATGTTAGTTACCCAC
TGACATACGGCACTCCCAGCTCTCGGGTAGAGGGAACCCCAAGAGTGGTGTAGGGGCACACCTGTGAGACAGA
GGCCTGACCTGGGCTCTGCACAGAAGGGCCTGCAAGTGGATCTGCAGTCTGACGGGGCAGCAGCAGAAGATATAG
TGGCAAGTGAGCAGTCTCTAGGCCAAAACTTGATCTGGGGAACAGATGTAAATGTGGCAGCATGCAAAGAAA
ACTTTCAGAGATTTCTTCAGCGTTTTATTGACCCTCTGGCTAAAGAAGAAGAAAATGTTGGCATAGATATTACTG
AACCTCTATACATGCAACGACTTGGGGAGATTAATGTTATTGGTGAGCAATTTTTAAATGTGAAGTGTGAACACA
TCAAATCATTGACAAAAATTTGTACAGACAACCTCATCTCTTACCCACAGGAAGTTATTCCAACCTTTTGACATGG
CTGTCAATGAAATCTTCTTTGACCGTTACCCTGACTCAATCTTAGAACATCAGATTCAAGTAAGACCATTCAACG
CATTGAAGACTAAGAATATGAGAAACCTGAATCCAGAAGACATTGACCAGCTCATCACCATCAGCGGCATGGTGA
TCAGGACATCCCAGCTGATTCCCCGAGATGCAGGAGGCCTTCTTCCAGTGCCAAGTGTGTGCCACACGACCCGGG
TGGAGATGGACCGCGGCCGCAATTGCAGAGCCAGTGTGTGCGGGCGCTGCCACACCACCACAGCATGGCACTCA
TCCACAACCGCTCCCTCTTCTCTGACAAGCAGATGATCAAGCTTCAGGAGTCTCCGGAAGACATGCCTGCAGGGC
AGACACCACACACAGTTATCCTGTTTGCTCACAATGATCTCGTTGACAAGGTCCAGCCTGGGGACAGAGTGAATG
TTACAGGCATCTATCGAGCTGTGCTTATTGAGTCAATCCAAGAGTGAGTAATGTGAAGTCTGTCTACAAAACCC
ACATTGATGTCAATTCATTATCGGAAAACGGATGCAAAACGTCTGCATGGCCTTGATGAAGAAGCAGAACAGAAAC
TTTTTTCAGAGAAACGTGTGGAATTGCTTAAGGAACCTTCCAGGAAACCAGACATTTATGAGAGGCTTGCTTCAG
CCTTGGCTCCAAGCATTATGAACATGAAGATATAAAGAAGGGAATTTTGCTTCAGCTCTTTGGCGGGACAAGGA
AGGATTTTAGTCACACTGGAAGGGGCAAATTTCCGGCTGAGATCAACATCTTGCTGTGTGGCGACCCCTGGTACCA
GCAAGTCCCAGCTGCTGCAGTACGTGTACAACCTCGTCCCCAGGGGCCAGTACACGTCTGGGAAGGGCTCCAGTG
CAGTTGGCCTCACTGCGTACGTAATGAAAGACCCCTGAGACAAGGCAGCTGGTCCTGCAGACAGGTGCTCTTGTC
TGAGTGACAACGGCATCTGCTGTATCGATGAGTTCGACAAGATGAATGAAAGTACAAGATCGGTATTGCATGAAG
TCATGGAACAGCAGACTCTGTCCATTGCAAAGGCTGGGATCATCTGTCTAGCTCAATGCGCGCACCTCTGTCTCG
CAGCAGCAAAATCCCATTGAGTCTCAGTGAATCCTAAAAAACAACCATTTGAAAACATCCAGCTGCCTCATACTT
TATTATCAAGGTTTGATTGATCTTCTCATGCTGGACCCTCAGGACGAAGCCTATGACAGGCGTCTGGCTCACC
ACCTGGTCGCACTGTACTACCAGAGCGAGGAGCAGGCAGAGGAGGAGCTCCTGGACATGGCGGTGCTAAAGGACT
ACATTGCCTACGCGCACAGCACCATCATGCCGCGGCTAAGTGAGGAAGCCAGCCAGGCTCTCATCGAGGCTTATG
TAGACATGAGGAAGATTGGCAGTAGCCGGGGAATGGTTTTCTGCATACCCCTCGACAGCTAGAGTCATTAATCCGCT
TAGCAGAAGCCCATGCTAAAGTAAGATTGTCTAACAAAGTTGAAGCCATTGATGTGGAAGAGGCCAAACGCCTCC
ATCGGGAAGCTCTGAAGCAGTCTGCAACTGATCCCCGGAAGTGGCATCGTGGACATATCTATTCTTACTACGGGGA
TGAGTGCCACCTCTCGTAAACGGAAAGAAGATTAGCTGAAGCATTGAAAAAGCTTATTTTATCTAAGGGCAAAA
CACCAGCTCTAAAAATACCAGCAACTTTTTGAAGATATTGCGGGACAATCTGACATAGCAATTACTAAAGATATGT
TTGAAGAAGCACTGCGTGCCCTGGCAGATGATGATTTCTGACAGTGAAGTGGGAAGACCGTGCGCTTGCTCTGA
GCCTTGAGCAAGGAAGGCTCCCTGCATGTCTATGCAATTCTGCACGCCACATGGGTGTGGTCATGCAATCATCA
GTTGGCCGCCATCAGTGTAATAGAGCTTAAAGTCATGGTTTGGCTGCATAAAAAATTTCTAACTTGGGTTCAA
TATTTGTAGTGAAAGTATCTGTTTTTCACTTTTTTACAGTTATAAATAAAAAATACTATGCTGGCCGGGCGCGGTGGC
TCACACCTGTAATCCCAGCACTTTGGGAGGCCAATGTGGGTGGATCATGAGGTCAGGAGTTCAAGACCAGCCTAG
CCAAGATGGTGAAACCCCGTCTCTAGTAAAGATAACAAAAAATTAGCTGGGCTTGATGGCATGCGCCTGTAATCC
CAGCTACTCGGGAGGTTGAGGCAGGAGATCGCTTAAACCCAGGCGGCAGAGGTTGCAGTGAGCCAAGATCGCGCC
ACTGCACTCCAGCCTCAGCAATAGAGTGAGACTGTCTCAAAAAAAAAA

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FIGURE 785

IRHERVATSSASGRLPRNARRRGRALARSRRERPRCGAGQGSREAGPARACPCRAGTPSTMSSPASTPSRRGSRR
GRATPAQTPRSEDARSSPSQRRRGEDSTSTGELQPMPTSPGVLDLQSTAAQDVLFSPPQMHSIAIPLDFDVSSPL
TYGTPSSRVEGTPRSGVRGTPVRQRPDLGSAQKGLQVDLQSDGAAAEDIVASEQSLGQKLVIWGTVDVNVAACKEN
FQRFLQRFIDPLAKEEENVGIDITEPLYMQRLGEINVIGEQLNVNCEHIKSFDKNLYRQLISYPQEVIPTFDMA
VNEIFFDRYPDSILEHQIQVRPFNALKTKNMRLNPEDIDQLITISGMVIRTSQLIPEMQEAFQVCQVCAHTTRV
EMDRGRIAEP SVCGRCHTTTHSMALIHNRSLFSDKQMIKLQESPEDMPAGQTPHTVILFAHNDLVDKVQPGDRVNV
TGIYRAVPIRVNPRVSNVKSVMYKTHIDVIHYRKTDKRLHGLDEEAEQKLFSEKRVELLKELSRKPDYERLASA
LAPSIYEHEDIKKGILLQLFGGTRKDFSHTRGKGFRAEINILLCGDPGTSKSQLQYVYNLVPRGQYTSKGKSSA
VGLTAYVMKDPETRLVLQTGALVLSDNIGICIDEFDKMNESTRSVLHEVMEQQTLIAKAGIICQLNARTSVLA
AANPIESQWNPKKTTIENIQLPHTLLSRFDLIFLMLDPQDEAYDRRLAHLVALYYQSEEQAEELLDMAVLKDY
IAYAHSTIMPRLSEEASQALIEAYVDMRKIGSSRGMVSAYPRQLESIRLAEAHAKVRLSNKVEAIDVEEAKRLH
REALKQSATDPRTGIVDISILTTGMSATSRRKRKEELAEALKKLILSKGKTPALKYQQLFEDIRGQSDIAITKDMF
EEALRALADDDFLTGTGKTVRLL

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FIGURE 786

GAATTCGGCACGAGCGAGTCGCGACGTCGTCGGCAAGCGGCCCTTCCACGTAACGCGCGCCGGCGGGGGAGGG
CGTTGGCGCGGAGCCGACGGGAACGTCCGCGCTGCGGAGCAGGGCAGGGAAGCCGGGAGGCGGGCCCGGCCGAG
CTTGTCCTTGTCGCGCAGGTACTCCGAGCACTATGTCGTCCCCGGCGTCGACCCCGAGCCGCCGCGGCAGCCGGC
GTGGAAGGGCCACCCCGCCAGACGCCTCGGAGTGAGGATGCCAGGTCATCTCCCTCTCAGAGACGTAGAGGCG
AGGATTCCACCTCCACGGGGGAGTTGCAGCCGATGCCAACCTCGCCTGGAGTGGACCTGCAGAGCACTGCTGCGC
AGGACGTGCTGTTTTCCAGCCCTCCCAAATGCATTCTTCAGCTATCCCTCTTGACTTTGATGTTAGTTACCCAC
TGACATACGGCACTCCCAGCTCTCGGGTAGAGGGAACCCCAAGAGTGGTGTAGGGGCACACCTGTGAGACAGA
GGCCTGACCTGGGCTCTGCACAGAAGGGCCTGCAAGTGGATCTGCAGTCTGACGGGGCAGCAGCAGAAGATATAG
TGGCAAGTGAGCAGTCTCTAGGCCAAAACTTGTGATCTGGGGAACAGATGTAAATGTGGCAGCATGCAAAGAAA
ACTTTCAGAGATTTCTTCAGCGTTTTATTGACCCTCTGGCTAAAGAAGAAGAAAATGTTGGCATAGATATTACTG
AACCTCTATACATGCAACGACTTGGGGAGATTAATGTTATTGGTGAGCAATTTTTAAATGTGAAGTGTGAACACA
TCAAATCATTGACAAAAATTTGTACAGACAACCTCATCTCTTACCCACAGGAAGTTATTCCAACCTTTTGACATGG
CTGTCAATGAAATCTTCTTTGACCGTTACCCTGACTCAATCTTAGAACATCAGATTCAAGTAAGACCATTCAACG
CATTGAAGACTAAGAATATGAGAAACCTGAATCCAGAAGACATTGACCAGCTCATCACCATCAGCGGCATGGTGA
TCAGGACATCCCAGCTGATTCCCGAGATGCAGGAGGCCTTCTTCCAGTGCCAAGTGTGTGCCCACACGACCCGGG
TGGAGATGGACCGCGGCCGATTGCAGAGCCAGTGTGTGCGGGCGCTGCCACACCACCCACAGCATGGCACTCA
TCCACAACCGCTCCCTCTTCTCTGACAAGCAGATGATCAAGCTTCAGGAGTCTCCGGAAGACATGCCTGCAGGGC
AGACACCACACACAGTTATCCTGTTTGCTCACAATGATCTCGTTGACAAGGTCCAGCCTGGGGACAGAGTGAATG
TTACAGGCATCTATCGAGCTGTGCCTATTCGAGTCAATCCAAGAGTGAGTAATGTGAAGTCTGTCTACAAAACCC
ACATTGATGTCAATTCATTATCGGAAAACGGATGCAAAACGTCTGCATGGCCTTGATGAAGAAGCAGAACAGAAAC
TTTTTTCAGAGAAACGTGTGGAATTGCTTAAGGAACCTTCCAGGAAACCAGACATTTATGAGAGGCTTGCTTCAG
CCTTGGCTCCAAGCATTTATGAACATGAAGATATAAAGAAGGGAATTTTGCTTCAGCTCTTTGGCGGGACAAGGA
AGGATTTTAGTCACACTGGAAGGGGGCAAATTTCCGGCTGAGATCAACATCTTGCTGTGTGGCGACCCCTGGTACCA
GCAAGTCCCAGCTGCTGCAGTACGTGTACAACCTCGTCCCCAGGGGCCAGTACACGTCTGGGAAGGGCTCCAGTG
CAGTTGGCCTCACTGCGTACGTAATGAAAGACCCTGAGACAAGGCAGCTGGTCCTGCAGACAGGTGCTCTTGTC
TGAGTGACAACGGCATCTGCTGTATCGATGAGTTGACAAGATGAATGAAAGTACAAGATCGGTATTGCATGAAG
TCATGGAACAGCAGACTCTGTCCATTGCAAAGGCTGGGATCATCTGTGACGCTCAATGCGCGCACCTCTGTCTGG
CAGCAGCAAAATCCCATGAGTCTCAGTGGAATCCTAAAAAACAACCATTGAAAACATCCAGCTGCCTCATACTT
TATTATCAAGGTTTGATTGATCTTCTCATGCTGGACCCCTCAGGACGAAGCCTATGACAGGCGTCTGGCTCACC
ACCTGGTGCAGCTGTACTACCAGAGCGAGGAGCAGGCAGAGGAGGAGCTCCTGGACATGGCGGTGCTAAAGGACT
ACATTGCCTACGCGCACAGCACCATCATGCCGCGGCTAAGTGAGGAAGCCAGCCAGGCTCTCATCGAGGCTTATG
TAGACATGAGGAAGATTGGCAGTAGCCGGGGAATGGTTTTCTGCATACCCCTCGACAGCTAGAGTCATTAATCCGCT
TAGCAGAAGCCCATGCTAAAGTAAGATTGTCTAACAAAGTTGAAGCCATTGATGTGGAAGAGGCCAAACGCCTCC
ATCGGGAAGCTCTGAAGCAGTCTGCAACTGATCCCCGGACTGGCATCGTGGACATATCTATTCTTACTACGGGGA
TGAGTGCCACCTCTCGTAAACGGAAAGAAGAATTAGCTGAAGCATTGAAAAAGCTTATTTTATCTAAGGGCAAAA
CACCAGCTCTAAAAATACCAGCAACTTTTTGAAGATATTCCGGGACAATCTGACATAGCAATTACTAAAGATATGT
TTGAAGAAGCACTGCGTGCCCTGGCAGATGATGATTTCCTGACAGTGAAGTGGGAAAGACCGTGCCTTGCTCTGAA
GCCTTGTGAGCAAGGAAGGCTCCCTGCATGTGATGCAATTCTGCACGCCACATGGGTGTGGTCATGCAATCATCA
GTTGGCCGCCATCAGTGTAATAGAGCTTAAAGTCATGGTTTGCTGCATAAAAAATTTTCTAACTTGGGTTCAA
TATTTGTAGTGAAGTATCTGTTTTTATTTTTTACGTTATAAATAAAAAATACTATGCTGGCCGGGCGCGGTGGC
TCACACCTGTAATCCCAGCACTTTGGGAGGCCAATGTGGGTGGATCATGAGGTCAGGAGTTCAAGACCAGCCTAG
CCAAGATGGTGAAACCCCGTCTCTAGTAAAGATAACAAAAAATTAGCTGGGCTTGATGGCATGCGCCTGTAATCC
CAGCTACTCGGGAGGTTGAGGCAGGAGATCGCTTAAACCCAGGCGGCAGAGGTTGCAGTGAGCCAAGATCGCGCC
ACTGCACTCCAGCCTCAGCAATAGAGTGAGACTGTCTCAAAAAAAAAA

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FIGURE 787A

GCTAAGAGGAGTCCCTGTGTGGGCAGCTGGAGCCTTCAGATTCTCTTCAGGGGAAGAGTCCACATCCCACCTCAT
CATGTCCCGAAGAAGCCAGCGCCTCACGCGTACTCCAGGGTGACGATGACGGCAGCAGCAGCAGCGGAGGGAG
CTCGGTGGCTGGGAGTCAGAGCACCTGTTTAAAGACAGTCCCTCTCAGGACCTTGAAGAGGAAATCCAGCAACAT
GAAGCGCCTGTCCCCAGCGCCACAGCTGGGCCCGTCTCTGATGCACACACCTCCTACTACAGTGAGTCGCTGGT
CCACGAGTCTGTGTTCCACCCAGGAGCTCCCTGGAGGAAC TGATGGTGACGCCA ACTGGGGTGAGGACCTGCG
GGTGCGGAGGAGGAGAGGCACGGGTGGCTCAGAGAGCAGCAGGGCCAGCGGGCTTGTTGGGGCGCAAGGCCACCGA
GGACTTCCTGGGCTCTTCTCGGGCTACTCTCTGAGGACGACTACGTGGGCTACTCGGATGTGGACCAGCAGAG
TTCCAGCTCGCGGCTCCGAAGCGCGTCTCACGGGCGGGCTCCTTACTCTGGATGGTGCCACTTCGCCAGGCCG
GCTCTTCAGACTTCTCTACTGGTGGGCTGGCACCACCTGGTACCGCCTGACCACAGCTGCCTCCCTCCTTGACGT
CTTCGTTTTAAACCAGGCGCTTCTCGTCCCTGAAGACGTTCTCTGGTTCCTGCTGCCGCTGCTCTTGCTGACGTG
CCTGACGTATGGTGCTTGGTATTTCTACCCCTATGGGCTGCAGACATTCCACCCTGCTTTGGTTTTCTGGTGGGC
AGCGAAGGACAGCAGGAGGCCGGATGAGGGCTGGGAAGCCAGAGACTCATCGCCACATTTCCAGGCTGAGCAGCG
TGTTATGTCCCGGGTACACTCTCTGGAGCGCGCTCTGGAAGCTCTTGCTGCTGAATTTTCTCCA ACTGGCAGAA
GGAGGCCATGCGGCTGGAACGTCTGGAGCTGCGGCAAGGGGCTCCTGGCCAGGGAGGTGGTGGTGGCCTGAGCCA
CGAGGACACCCTGGCGCTGCTGGAGGGGCTAGTGAGCCGCCGTGAAGCTGCCCTGAAGGAGGATTTCCGCAGGGA
AACTGCTGCTCGCATCCAGGAAGAACTGTCTGCCCTGAGAGCAGAGCATCAGCAAGACTCAGAAGACCTCTTCAA
GAAGATCGTCCGGGCCTCCAGGAGTCCGAGGCTCGCATCCAGCAGCTGAAGTCAGAGTGGCAAAGCATGACCCA
GGAGTCTTCCAGGAGAGCTCTGTGAAGGAGCTGAGGCGGCTGGAGGACCAGCTGGCCGGCCTGCAGCAGGAGCT
GGCGGCTCTGGCACTGAAGCAGAGCTCGGTGGCGGAAGAAAGTGGGCTGCTGCCCCAGCAGATCCAGGCCGTGCG
GGACGACGTGGAATCTCAGTTCCCGGCTGGATCAGTCAGTTCTTGCCCGAGGTGGAGGGGGCCGCGTGGGGCT
CCTTCAGAGAGAGGAGATGCAAGCTCAGCTGCGAGAGCTGGAGAGCAAGATCCTCACCCATGTGGCAGAGATGCA
GGCAAGTCGGCCAGGGAAGCCGCGGCTCCCTGAGCCTGACGCTGCAGAAAGAAAGGTGTGATTGGAGTGACAGA
GGAGCAGGTGCACCACATCGTGAAGCAGGCCCTGCAGCGCTACAGTGAGGACCGCATCGGGCTGGCAGACTACGC
CCTGGAGTCAGGAGGGGCCAGCGTCATCAGCACCCGATGTTCTGAGACCTACGAGACCAAGACGGCCCTCCTCAG
CCTCTTCGGCATCCCCCTGTGGTACCACTCCAGTCACCCCGAGTCATCCTCCAGCCAGATGTGCACCCAGGCAA
CTGCTGGGCTTCCAGGGGCCACAGGGCTTCGCCGTGGTCCGCCTCTCTGCCCGCATCCGCCCCACAGCCGTTAC
CTTAGAGCATGTGCCCAAGGCCTTGTCACCCAACAGCACTATCTCCAGTGCCCCCAAGGACTTCGCCATCTTTGG
GTTTGACGAAGACCTGCAGCAGGAGGGGACACTCCTTGGCAAGTTCACTTACGATCAGGACGGCGAGCCTATTCA
GACGTTTCACTTTCAGGCCCCCTACGATGGCCACGTACCAGGTGGTGGAGCTGCGGATCCTGACTAACTGGGGCCA
CCCCGAGTACACCTGCATCTACCGCTTCAGAGTGATGGGGAGCCCGCCCACTAGCCCTGCTTACTGGTGCCTGC
TGCCAGCCATCTGGGAGTGGGTGAACAGCACCCCGCCGCTTCCCCCACACGCTTGCTCGGCGCTCTGACTTCTAG
GAGCACAAGAGAGGAGCCTGTGGCCCCATGCAGATGAAAAGGACGGGCAGGGTCTCCTGAGCAGCAGGTGGCTCG
AGGCGGTTAGCAGGCTCCAGCAGCTCCCTTCTTCTTCCCTCTGTGCCCGTGGCGTCTGCTTCCCATCTGGGAG
TGTGTATATATGTAGCATATCATGGGGGACTGGGAAGTTGGGAGAGGTAGGACCTGACTGGTCTTGGCTGGGGTC
AGGGGCTGGTGCCTGGGAGCTGATGAAGCAGGTGCCAGGGCTGTGGGAGGGGCAAGCTACGGCCTGGGCTAGGTG
AGCTGCCTCTGCCCCCTGGGCAAGGAAGCGAGGCCCTCTGGGAGGAGGGTGCTTAGCTCCAGAGCAGGATGGGACT
TCCCCAGGCAGGAAGCACTTGATGGAGAGCTGCCAGCTCTCCTACAAGGTTAGTGCCCTCCACCTAGGGAAGCC
TGAACCACAGGGTCCCTGAGGGCCTTCGACAAAAGTGTGTATTTGTCCCGGGGAGGGTAGCAGTGGGCCATGGGG
CTTCTTGTCGCCCTAAAGGGGACTGGCTGCTGTGATCTTCTAAGGGGCCAGGGCCAACCCTGTAGGCTTCCCCTC
TGCTGGGGACGGTAGTTGCTTTTCTCTCTCTCTGATGCTAGGTTGGGGCCACCCTGCTCCCTGTTCTGCTAGGG
CCTGCCAGTGCCCTGAGCTTGCTTTCCACATTCTCCAGGGTATGGAGACCTAGACCTGTCTTGGGGCCATTA
GCATCTGGGGTTATAGCAAGAAGAGTGGGGAGCATGGAACCTCTGGGCTCTTGTTGGGGACGTTACAGGGTATCGGG
GTGCGAGGTCTGTCTGCACCGGCCCCCACATCTAACCAGGCCCTGATGTAGGGGTCGTCCGCTCAGGCTGCCCC
TTGGGCTCTTGACGCTCTTGTTACAGGTAGTCGCCCTTCTGGTTTGTCTCTGTGGGGCAGTTGGTGGGGGCTGGG
GGAAGAGGCTGGCAGAAGTTACCCTGGATAGGGAAGGGGGAGGAGGGGACTTTTAGAGCCAGCAGGCCCACTGT
ATTATGTATATATTTTCAAGGTCTGTTTTTCTA ACTGAAAAGCTAAGGGCTTGATTCTAGCCCCGTTCTGTGG
GGCACTGGGTGATACTCAGTTTCTTGTTTCTTGCCGCTGGAGAGGGGCTGGGGCACTGGTTCCGGCTGTGTCTGG
TGGTCCGGCTGCAGGGAAGGGGCAAGAAGCGGGCAGGCCTTCACTGCAGCACTGAGCCTCAAATCCGCTCTGGA

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FIGURE 787B

GCATGAGGCTGGATGCAGTGGTGGTGAGGCCGCCCCGCTCCATCCCGAGGCAGCCAGGCTTTGTTTTGCGCTCTC
CTGTCACAAATGCTGCACTATTGGTTCTTAAGTTTTTTATCTCCAGATCCTAATTTATGCCTATGCAAAAAATAA
ATGACGCCCAAGAGCTG

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FIGURE 788

AGTTCTCACTGAGACCTGTCACCCCGACTCAACGTGAGACGCACCGCCCGGACTCACCATGCGTGAATGCATCTC
AGTCCACGTGGGGCAGGCAGGTGTCCAGATGGGCAATGCCTGCTGGGAGCTCTATTGCTTGGAACATGGGATTCA
GCCTGATGGGCAGATGCCAGTGACAAGACCATTGGTGGAGGGGACGACTCCTTCACCACCTTCTTCTGTGAAAC
TGGTGTGAAAAACACGTACCCCGGGCAGTTTTTGTGGATCTGGAGCCTACGGTCATTGATGAGATCCGAAATGG
CCCATACCGACAGCTCTTCCACCCAGAGCAGCTCATCACTGGGAAAGAGGATGCTGCCAACAACTATGCCCGTGG
TCACTATACCATTGGCAAGGAGATCATTGACCCAGTGCTGGATCGGATCCGCAAGCTGTCTGACCAGTGCACAGG
ACTTCAGGGCTTCCTGGTGTTCACAGCTTTGGTGGGGGCACTGGCTCTGGCTTCACCTCACTCCTGATGGAGCG
GCTCTCTGTTGACTATGGCAAGAAATCCAAGCTGGAATTCTCCATCTACCCAGCCCCCAGGTGTCTACAGCCGT
GGTCGAGCCCTACAACCTCTATCCTGACCACCCACACCACCCTGGAGCACTCAGACTGTGCCTTCATGGTGGACAA
CGAAGCAATCTATGACATCTGCCGCCGCAACCTAGACATCGAGCGCCCAACCTACACCAACCTCAATCGCCTCAT
TAGCCAAATTGTCTCCTCCATCACAGCTTCTCTGCGCTTTGACGGGGCCCTCAATGTGGACCTGACAGAGTTCCA
GACCAACCTGGTGGCCCTACCCTCGCATCCACTTCCCCCTGGCCACCTATGCACCAGTCATCTCTGCAGAAAAGGC
ATACCACGAGCAGCTGTCGGTGGCAGAGATACCAATGCCTGCTTTGAGCCTGCCAACCAGATGGTAAAGTGTGA
TCCCCGGGCACGGCAAGTACATGGCCTGCTGCCTGCTGTACCGTGGAGATGTGGTGCCCAAGGATGTCAACGCTGC
CATTGCCGCCATCAAGACCAAGCGCAGCATTTCAGTTTGTGGACTGGTGCCCCACAGGCTTCAAGGTTGGTATCAA
CTACCAGCCTCCCCTGTGGTGCCTGGGGGTGACCTGGCCAAGGTGCAGCGTGCCGTGTGCATGCTGAGCAACAC
GACCGCCATCGCCGAGGCCTGGGCCCCGCTGGACCACAAGTTTCGACCTGATGTATGCCAAGAGGGCGTTTGTGCA
CTGGTATGTGGGTGAGGGCATGGAGGAGGGTGAGTTCTCCGAGGCCCCGTGAGGATATGGCTGCCCTGGAGAAGGA
TTATGAGGAGGTGGGCATCGACTCCTATGAGGACGAGGATGAGGGAGAAGAATAAAGCAGCTGCCTGGAGCCTAT
TCACTATGTTTATTGCAAAATCCTTTCGAAATAAACAGTTTCCTTGACCGGTTAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAA

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FIGURE 789

MRECISVHVGQAGVQMGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFITFFCETGAGKHVPRAVFVDLEPTVI
DEIRNGPYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDPVLDRIKRLSDQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIRPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMCCCLLYRGDVVPKDVNAIAAIAIKTKRSIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEEVGIDSYEDEDEGEE

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FIGURE 790

GACCGAAGCAAGAGCTGGTTCAGGTGGCAGCCACAGCAGCCTCAGGGACCTCAGCAACTATGGCCTCCTGCCCAG
ACTCTGATAATAGCTGGGTGCTTGCTGGCTCCGAGAGCCTGCCAGTGGAGACACTGGGCCCCGGCATCCAGGATGG
ACCCAGAATCTGAGAGAGCCCTGCAGGCCCCCTCACAGCCCCCTCCAAGACAGATGGGAAAGAATTAGCTGGGACCA
TGGATGGAGAAGGGACGCTCTTCCAGACTGAAAGCCCTCAGTCTGGCAGCATTCTAACAGAGGAGACTGAGGTCA
AGGGCACCCCTGGAAGGTGATGTTTGTGGTGTGGAGCCTCCTGGCCCAGGAGACACAGTAGTCCAGGGGAGACCTGC
AGGAGACCACCGTGGTGACAGGCCTGGGACCAGACACACAGGACCTGGAAGGCCAGAGCCCTCCACAGAGCCTGC
CTTCAACCCCCAAAGCAGCTTGGATCAGGGAGGAGGGCCGCTGCTCCAGCAGTGACGATGACACCGACGTGGACA
TGGAGGGTCTGCGGAGACGGCGGGGGCCGGGAGGCCGGCCCCACCTCAGCCCATGGTGCCCTGGCTGTGGAGAACC
AGGCTGGGGGTGAGGGTGCAGGCGGGGAGCTGGGCATCTCCCTCAACATGTGCCTCCTTGGGGCCCTGGTTCTGC
TTGGCCTGGGGGTCTCTCTCTTCTCAGGTGGCCTCTCAGAGTCTGAGACTGGGCCCATGGAGGAAGTGGAGCGGC
AGGTCTCTCCAGACCCCGAGGTGCTGGAAGCTGTGGGGGACAGGCAGGATGGGCTAAGGGAACAGCTGCAGGCCC
CAGTGCCTCCTGACAGTGTCCCCAGCCTGCAAAACATGGGTCTTCTGCTGGACAAGCTGGCCAAGGAGAACCAGG
ACATCCGGCTGCTGCAGGCCAGCTGCAGGCCCAAAAGGAAGAGCTTCAGAGCCTGATGCACCAGCCCCAAAGGGC
TAGAGGAGGAGAATGCCAGCTCCGGGGGGCTCTGCAGCAGGGCGAAGCCTTCCAGCGGGCTCTGGAGTCAGAGC
TGCAGCAGCTGCGGGCCCCGGCTCCAGGGGCTGGAGGCCGACTGTGTCCGGGGCCAGATGGGGTGTGCCTCAGTG
GGGGTAGAGGCCACAGGGTGACAAGGCCATCAGGGAGCAAGGCCCCAGGGAGCAGGAGCCAGAACTCAGCTTCC
TGAAGCAGAAGGAACAGCTGGAGGCTGAGGCACAGGCATTAAGGCAAGAGTTAGAGAGGCAGCGACGGCTGCTGG
GGTCTGTACAGCAGGATCTGGAGAGGAGCTTGACAGGATGCCAGCCGCGGGGACCCAGCTCATGCTGGCTTGGCTG
AGCTGGGCCACAGATTGGCCCCAGAACTGCAGGGCCTGGAGAAGTGGGGCCAGGACCTGGGGTCTCTGCCAATG
CCTCAAAGGCCTGGCACCAGAAGTCCCCTTCCAGAATTCTAGGGAGTGGAGTGGAAAGGAAAAGTGGTGGGATG
GGCAGAGAGACCCGAAGGCTGAGCACTGGAAACATAAGAAGGAAGAATCTGGCCGGGAAAGGAAGAAGAACTGGG
GAGGTACAGGAGACAGGGAGCCAGCAGGAAGGTGGAAGGAGGGCAGGCCAAGGGTGGAGGAGTCGGGGAGCAAGA
AGGAGGGCAAGCGACAGGGCCCCGAAGGAACCCCCAAGGAAAAGTGGTAGCTTCCACTCCTCTGGAGAAAAGCAGA
AGCAACCTCGGTGGAGGGAAGGGACTAAGGACAGCCATGACCCCTGCCATCCTGGGCAGAGCTGTTGAGGCCCA
AGTACCGGGCACCCAGGGCTGCTCAGGTGTGGACGAGTGTGCCCGGCAGGAGGGCCTGACTTCTTTGGCACAG
AGCTAGCCCCAGTGCGGCAACAGGAGCTGGCCTCTCTGCTAAGAACATACTGGCACGGCTGCCCTGGGCTGGGC
AGCTGACCAAGGAGCTACCCCTCTCACCTGCTTTCTTTGGTGAGGATGGCATCTTCCGTCATGACCGCCTCCGCT
TCCGGGATTTTGTGGATGCCCTGGAGGACAGCTTGGAGGAGGTGGCTGTGCAACAGACAGGTGATGATGATGAAG
TAGATGACTTTTGGAGACTTCATCTTCAGCCACTTCTTTGGAGACAAAGCACTGAAGAAGAGGTCAGGGAAGAAGG
ACAAGCACTCACAGAGCCCCAAGAGCTGCGGGGCCAGGGAGGGGCACAGCCATAGCCACCACCACCACCACCGGG
GCTGACACCCTGCCCCACAGGGAATGGCCTTGGCCTGGCCCAGCCCCAAGATCCAGCGTTATCTAACTCCTGGAG
GGTGGACTCTGTCTCTGGCTTGTTTGGTGTCCTCAGATATCTTTACACAGTAGAGCAAAATCACCAGCCCTGCAC
TGATGTCACTTTATGTAGAAAAAGGCCTTAGCTGGACCTGCGTTGCCGTCTATGCAAAATGCATGCAAAATCTCCA
GGCCCTGGGATGTGGGCTTGTGTTTGTCACTGTGAAGGGGGAGATGGGAGAGGAGCCTGTTTTGGGGTGGGGTC
TGGGGAAGGCAATCTGATTCTGAAGCTAAAGAGCTTTCATCCTCTTGAGTGTATGTCCCCATAGTGGGCCCCCTTG
ACCCACATGCTGACCGGTGCCTTGGGATTTGACTAGAGTTGCTGGCTCGAGGCCCAGCACGAGGACTTACCCTGG
GGTTTTGTTAGGTTTGAAGCAGCTGTCCCTAGGGGGTGAAGTCCCCCCCCCTTTTTTTTTTACCCTGCTTCTC
CCACGGCTTACCTCCCTATGTGAAGTGTAGACTCAGATCCCAATAAAGTGCTGTTGCAGCTATGATGCTAGGTG
GTTTCTAAGCACAGGGGACACCCACACCCCTGCCTGAATGGATGGGTCCATCCCAGGCACTGGTACTTGCCCC
CTTGTCTGTATCCCCCTTTGCCCTTGCCCTTCCAACAAACCCTAGGCCCTTGAGAAGCTGATACTTCTC
CTTTTGCTCACAGCTGCCTTGGCCCCACCCCTGGGAGATGTAGCAAATTGAGTGTGGGTTTTGGAGTCTGAGCCT
CAGGCTCAAATCCAGGCCAAGTGATCTTGGGCAAGTTAATCTCTGGGAACCTTGGGTTTCTTATCCTCAAAAAAG
GCGATGGAAGGGCTGGGGAAGTGATTAAATAAAAGCAACGCAAGAAAAA

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FIGURE 791

MASCPDSDNSWVLAGESESLPVETLGPASRMDPESERALQAPHSPSKTDGKELAGTMDGEGTLFQTESPQSGSILT
EETEVKGTLEGDVCGVEPPGPGDTVVQGDQLQETT VVTGLGPD TQDLEGQSPQSLPSTPKAAWIREEGRCSSDD
DTDVDMEGLRRRRRGREAGPPQPMVPLAVENQAGGEGAGGELGISLNMCLLGALVLLGLGVLLFSGGLSESETGPM
EEVERQVLPDPEVLEAVGDRQDGLREQLQAPVPPDSVPSLQNMGLLLDKLAKENQDIRLLQAQLQAQKEELQSLM
HQP KGLEEENAQLRGALQQGEAFQRALESELQQLRARLQGLEADCVRGPDGVCLSGGRGPQGDKAIREQGPREQE
PELSFLKQKEQLEAEQAALRQELERQRRLLGSVQQDLERSLQDASRGDPAHAGLAELGHRLAQKLQGLNNGQDP
GVSANASKAWHQKSHFQNSREWSGKEKWWDGQRDRKAHWHKKKEESGRERKKNWGGQEDREPAGRWKEGRPRVE
ESGSKKEGKRQGPKEPPRKSGSFHSSGEKQKQPRWREGTKDSHDPLPSWAELLRPKYRAPQGCSGVDECARQEG
TFFGTELAPVRQQELASLLR TYLARLPWAGQLTKELPLSPAFFGEDGIFRHDRLRFRDFVDALEDSLEEVAVQQT
GDDDEVDDFEDFIFSHFFGDKALKKRSKGKKDKHSQSPRAAGPREGHSHSHHHHHRG

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FIGURE 792

CTCTTCTCACATCAGCGGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGAGTGG
CTGCTGGGCCTCTACTTCCTCAGCCACATCCCCATCACCTGTTCATGGACCTGCAGGCGGTGCTGCCGCGCGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTCAGCTGCCTTTCTTTCCATTGCAACGTATGCC
TTCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTCACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTTG
CATGAACGGTTAACCCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTCTACTTTTAATTTTCATGTTG
CGGAGCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAAAAATGAAGGAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCCACGTCTTCAGCAGCATTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTCACCTTCTTCCATTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCTTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCACTGGGCCCAGCCCCAAACC
TTCACCTTCTAAGGGCACTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTGCCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCTC
CACTCCTGATTCTCAAGAGTGTATCACCTGTGAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCTCTTTAATGTTAATTCAAACTATATCAATGTTTTCTTGTTCACCTCTAACCCAAGGAAAAAAG
AGAAAAACATACTATGCAAAGGAAGTTTAACTTAAGTTTTCTTAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAAACTGGAAAATGTTTTGTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTGTTTGT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAATACA
GTTCCGTCATTCCCATCTTGTTCAGAAAGAGAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTCACGTTGATGCTTGGCATTCCATCAGCTTTCTCTAAGTCTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCCAGTCAGTCCCCTCTATTTTCAACCATTTTGCTCACAAGCCATATTGGCCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGGAATT

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FIGURE 793

CTCTTCTCACATCAGCGGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGAGTGG
CTGCTGGGGCTCTACTTCCCTCAGCCACATCCCCATCACCTGTTCATGGACCTGCAGGCGGTCTGCGCGCGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTCAGCTGCCTTTCTTTCCCATTGCAACGTATGCC
TTCCCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTTACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTG
CATGAACGGTTAACCCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTTCATACTTTTAAATTTTCATGTTG
CGGAGCCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAATGGAAGGAAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCCACGTCTTCAGCAGCATTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTCACCTTCTTCCATTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCCTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCCTGGGGCCAGCCCCAAACC
TTCACCTTCTAAGGGCCTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTTGCCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTCATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCTC
CACTCCTGATTCTCAAGAGTGTATCACCTGTGAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCTCTTTAATGTTAATTCAAACCTATATCAATGTTTTCTTGTTCACCTCTAACCAAGGAAAAAAG
AGAAAAATACTATGCAAAGGAAGTTTAAACTTAAGTTTTCTTAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAAACTGGAAAATGTTTTGTTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTGTTTGT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAAATACA
GTTCCGTCAATCCCATCTTGTTTTTCTGAGAGAGAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTACGTTGATGCTTGGCATTCCATCAGCTTTCTCTAAGTCTTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCAGTCAGTCCCTCTATTTTACCCATTTTGCTCACAAGCCATATTGGCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGGAATT

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FIGURE 794

LFHQQRVQAQPTDYGGSFTRRCVEWLLGLYFLSHIPITLFMDLQAVVPRELYPVEFRNLLKWYAKEFKDPLLQEP
PAWFKSFLFCELVFQLPFFPIATYAFLKGSCKWIRTPAIIYSVHTMTTLILILSTFLFEDEFSKASGFKGQRPETL
HERLTLVSVYAPYLLIPFILLIFMLRSPYYKYEEKRKKK

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FIGURE 795

ATGTGGCTTCATCGAGTATTCCTTTGTGAATTCCTGGATGAAATTTTCAAGGCAAACAGGAAAAGCACTGAAATT
GCTGAATGGTGGCGAACGGAGCCACGAGGGAAGGGAGCGCCGCCGCGCAGCTGCCGGGACACCAGGATACCACGCG
GCCAGCACCGAAACGCTAGGCTCGCGCTCACAACCGCAATCTACACTGAGTAGCCGCGCGCCGAACGGCGTGACT
AAGCCCCGCCCACACGGCGCTCCTGGCGGCCAATGGAAATGGCTTACGAGACGCCTTCTCCACGCGCTATACTTA
TACGGACCAATGGGTGCGCCCTGTGGGGAGTGCCGCCCCCTGTCCACGAGCCTCCTCTTCTCGCCAGCCAATGGA
AGCGGTCTGCCTAGCCCTCGCGGGGGCAAGGCGGCGACCGAGGCGCGTGGGTCTGGGAAGGCGCGCGGATTTGGC
CTCTTCTCACATCAGCGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGGAGTGG
CTGCTGGGCCTCTACTTCCTCAGCCACATCCCCATCACCTGTTCATGGACCTGCAGGCGGTCTGCGCGCGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTTCAGCTGCCTTTCTTTCCATTGCAACGTATGCC
TTCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTTACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTTG
CATGAACGGTTAACCCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTCATACTTTTAAATTTTCATGTTG
CGGAGCCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAAAAATGAAGGAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCACAGTCTTCAGCAGCATTTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTACCTTCTTCCATTTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCTTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCACTGGGCCAGCCCAAACC
TTCACCTTTCTAAGGGCACTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTGCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTCATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCTC
CACTCCTGATTCTCAAGAGTGATCACCTGTCAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCCCTCTTTAATGTTAATTCAAACTATATCAATGTTTTCTTGTTCACCTCTAACCCAAGGAAAAAAG
AGAAAACATACTATGCAAAGGAAGTTTAACTTAAGTTTTCTTAAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAACTGGAAGATGTTTTGTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTGTTTGT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAAATACA
GTTCCGTCAATCCCATCTTGTTCAGAAAGAGAAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTACGTTGATGCTTGGCATTCCATCAGCTTCTCTAAGTCTTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCCAGTCAGTCCCCCTCTATTTTACCCATTTTGCTCACAAGCCATATTGGCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGAATT

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FIGURE 796

MWLHRVFLCEFLDEIFKANRKSTEIAEWWRTPEPRGKGAPPAAAGTPGYHAASTETLGSRSQPQSTLSSRAPNGVT
KPRPHGAPGGQWKWLTRRLHLALYLYGPMGAPCGECRPLSTSLFSPANGSGLPSRGGKAATEARGSGKARGFG
LFSHQRVQAQPTDYGGSFTRRCVEWLLGLYFLSHIPITLFDLQAVVPRELYPVEFRNLLKWKYAKEFKDPLLQEP
PAWFKSFLFCELVFQLPFFPIATYAFLKGSCKWIRTPAIIYSVHTMTTLILILSTFLFEDFSKASGFKGQRPETL
HERLTLVSVYAPYLLIPFILLIFMLRSPYYKYEEKRKKK

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FIGURE 797

GGCTTACAGGAGGGCAGCTCTGCAGTTGGGAGGGGCACCGTCCGGAGGAGACCAGGCCTCTACACACCCCCCACT
CTACTTATCATCCCTGCTCACACACCCCTTGTCCTCAAGGCTTTATGCATCGGATTTATTTTTCCAAATCAAGAGGAC
AGTGATAGATGCATTTTCCCCAGGCTGTCTCAGAAAGGTCGCTAAATGTATACTGTTGTCAGAATTGCTGAGATC
TCCCCCACTTTTGGTTTTTGCAGCAGTAAAACTCTTTCCACTGTGACTTATTTTCTCTCTCAGGCAGCCAGCC
ACCTGGTCCCTTGTGCTGACTCTAGCACAGTGGCCAGGATCCAATACGAGTCCAGGGGTGACCGCAGGATGGTGG
GGGCAGCGGGCTTCTCCACCTACCCAGCCACCAAGGCCCTGACGCACTGCCTCCTGCACCTTCAGCACATCCCT
GTGCACAGCTGGAAGGGTGCATGGCCCCGCTCACCTTTGTTTCAGATGGGTGGAAACGCTGATGATACCAGCTCCTC
CCTGCCGTGCCCCTGCCACGGAGCAGGCATTGTGAACGGCTGGTGGTTTGCAGTCCCACGTGGCATGGCCTCCAG
CCCAACCCACAGTGGAGACTGGAGACAGGGCAATGAGTCTGGTCGGGGGCACGTGGACATGCCCCATAGGGGGCCC
CACCCAGACTTAACAGGCAAGGTCTGGGCATTGCGCGACGCAGGACTCAATGCTAAAGCAAGCCTGCCTGGCTC
TGTGCCAGGGCCCCCTCTTCTGATTTACACATCCCATTTTTACACAGACCCTTCCTTCTTAATAAAGGCTGACAGT
TCTGTTGGCAGCCAAGAACCCACACCATGAAGACAGGGAGTGAGGGGCCTTTGTGCCCAACTCCAGCACAGCTGC
GTTCTGGGGTGTGTGAGAGGCATGTTTCGTGTCTGTGCGTGGTGGTCTCGTGAGACAGTTCCGAGGACGGGGAAA
TTGCAGGGTGGTGGGGCGTGAGGCTTATATGTGGAAGTGTGAGAGTTTCGCCTGCAGACGGATCTGGATATAC
ACTATGTATAATTGTTACGTGTAATTTAAATATATCTGTTTGCCATCGTCATGAGAAGATTATATGTAAGGCTC
TGAAGGGAGAGGGAGATGTACATTCTGCCAGGCTCCTGGGGACCTTATCCGAGTCATGAAATTGATGACTGTTGA
TCCAGTGGTGCAAGAAGCTACACTCCATGTGTTCATCACGCTTATGACTCCTAATGTATTTTTAAGGCAAAAAATG
TCAGCCGACTCCATCTTCACCCCTCGATTCTCGAGTCCAGCCTTTCTGTGCCAGTGCTTCACTGAGCCACAACG
CTCTCGCCATCGGGACCCGGCTGGGCCTGGAGTCTCGGGGCACAGTTGCCATGGAGCCCTCCTGGGTCACTTCTAC
AAATGTGCTGAGTGCCAGCTGAAAACCCACAGGAGATGGAGTACCTTGGCCAAGCTTAAAGAGAAGATTTTCTC
AGGGTATTTATTAGTGTGTCCAGCAGGGTCAGGAAGCAGGATGGAAAGATGCATTCAGACTGTTAATTTATTAAC
AAGGCAAATGATTTTGTGTTTCTTGATGACAGACTATTAAGTTTGGGACTTATTTTCCATTTGAGAAGTTATAA
TATATATTTAAGATGATAAGTTTCCTGCTTAAGTTGTGCCTTTCAGCTTCAATGAGTTTAAGGAGCACTAAGGGT
AATGATACCAATGAGGGTTGGTTTATTATCAAACCTGAATAGCTGTGGTTTCTCCAGTAAATATTTTCTTCTACT
GAACATGGAGCCATTATTAAGAGTTGTGTGTTTTTATTATGTACATTTGTATATTTTTTGTCTTGTGTTGATGTT
CTATTTTCTAATAGTTTTCTTTTAGTTTTCTTAAAGTTGTGATACTAGATTTAGATTCTGATGCTAACTGCAAAAT
CAGGTTGGTCTCTGCTGGGTCTCTCCTGCTTTTATTTTACTTTAAGGACAAGTGTAGTTGTCGTCCACCACCTTT
CAAAAAATGTGAAACTGCCCTGCCCTCCCCTTTTTGCTGACAACACTGTGTACATTGACCACCTTCTACCATACTT
TATGTTGTAAATCAAACCTTTTTGTGGTACATTATCTCATGCTTCTGCAAATTCGAATAAATCTATGGCTTCC
AAAAAAAAAAAAAAAA

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FIGURE 798

MKLMTVDPVVQEATLHVSSRL

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FIGURE 799

GCCTCACCACAGAGGCAAGACAAGGGTCCATATCGCGGCATCCGGCTCCCGCCCGTCTTCAGGAGAGAAAGAAAA
AATAAAATATACCTTGGGGAAGTTGTACCTGCCAGAATTAGTAAGAGCTTCTTTAAGAAGACATTTGTCAAACCTC
AACAAATTGAAGGTAAACACCTTAAGAGTTGTAGTTACTGACCAGAAATATGGACAGACTTCTTAGACTTGGAGG
AGGTATGCCTGGACTGGGCCAGGGGCCACCTACAGATGCTCCTGCAGTGGACACAGCAGAACAAGTCTATATCTC
TTCCCTGGCACTGTTAAAAATGTTAAAACATGGCCGTGCTGGAGTTCCAATGGAAGTTATGGGTTTGATGCTTGG
AGAATTTGTTGATGATTATACCGTCAGAGTGATTGATGTGTTTGCTATGCCACAGTCAGGAACAGGTGTCAGTGT
GGAGGCAGTTGATCCAGTGTTCAGCTAAAATGTTGGATATGTTGAAGCAGACAGGAAGGCCGGAGATGGTTGT
TGGTTGGTATCACAGTCACCCTGGCTTTGGTTGTTGGCTTTCTGGTGTGGATATCAACACTCAGCAGAGCTTTGA
AGCCTTGTCGGAGAGAGCTGTGGCAGTGGTTGTGGATCCCATTCAGAGTGTAAAAGGAAAGGTTGTTATTGATGC
CTTCAGATTGATCAATGCTAATATGATGGTCTTAGGACATGAACCAAGACAAACAACCTCGAATCTGGGTCACCT
AAACAAGCCATCTATCCAGGCATTAATTCATGGACTAAACAGACATTATTACTCCATTACTATTAACATATCGGAA
AAATGAAGTGAACAGAGATGTTGCTAAATTTGCATAAGAAGAGTTGGATGGAAGGTTTGACACTTCAGGACTA
CAGTGAACATTGTAAACACAATGAATCAGTGGTAAAAGAGATGTTGGAATTAGCCAAGAATTACAATAAGGCTGT
AGAAGAAGAAAGATAAGATGACACCTGAACAGCTGGCAATAAAGAATGTTGGCAAGCAGGACCCCAAACGTCATTT
GGAGGAACATGTGGATGTACTTATGACCTCAAATATTGTCCAGTGTTTAGCAGCTATGTTGGATACTGTCGTATT
TAAATAA

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FIGURE 800

MDRLLRLGGGMPGLGQGPPTDAPAVDTAEQVYISSLALLKMLKHGRAGVPMEVMGLMLGEFVDDYTVRVIDVFAM
PQSGTGVSVEAVDPVFQAKMLDMLKQTGRPEMVVGWYHSHPGFGCWLSGVDINTQQSFEALSERAVAVVVDPIQS
VKGKVVIDAFRLINANMMVLGHEPRQTTSNLGHLNKP SIQALIHGLNRHYYSITINYRKNELEQKMLLNHLHKKSW
MEGLTLQDYSEHCKHNESVVKEMLELAKNYNKAVEEEDKMTPEQLAIKNVGKQDPKRHLEEHVDVLMTSNIVQCL
AAMLDTVVF

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FIGURE 801A

GGGGACATTTTGGATTACCTTATGTAGGTTGCCAGCTAATGAATTGTAATTGATTTCAATCTTAGCTGATAAAATCTAATTGGTAATTTATAGAACAAATATTTGATAAGCTCCTATTAAATTGTCACCCACCAAGCGGACAGCTAACATGAATTGCACTTCACTGCAGCTTTAGAGATCGGTTTAGGCTGAGACATTGCGCCTGCCTTAGGTTGCTGACTTCTTTATTTTCAGAGCTCTGGAGACACCTAGTTTGAAAAATGTTATTCTGTTTTTTTGTGAGAACTTAGTAAACAAGAAAATACTCTTGAGTGAATGCAATGTATTTCTTTTGTAAATCAGTGCATTTGAAAATTCAAGCCAGCATATTCCTAGTAGATGGAAGCAAAATTAAGTTGTCTTTGTAGAAAATGAAGAGCCTTTCTTCCAGCAAAAATCCCTGCTGTATGCAATAGCCCTGATTAACCTCTCCCTTCTGCAATGTTTCCCATATTACAGACTTGAGACTGTCTCATTTCCCATATGTAAATAGACATCCAAAGAAATTTCAATTGCTTTGTTGAACTTTTACTAATGATCTTGTTTTTATTTTCTCTCTTGTTTTGGTTTTTCCACATTGATATTGTATTTAGAAGGTTTCAGGTGGGGTGAACCTCCTATTCCATGCGTAAGGTGCCTCGCTGAAGGGAGCTCGAGGCCTGGATCTAGGGCAGACACACAACCTCCTCCTCCTTCCAGCAAGGAACGCACCGAAAAGTCACATGATGAGAAATATGGTAACGGGTTTGTAACTGCCACAGCAAAAACAATTTGCCTCCATGCCTGAATCTTCTGTCTTGTGGCTTCAGAAACAGCTTAAAATAATTTTTATTTACAAGCAAGTTATGTAAGAGAATGTTTTATCTATAGCCACAATTTCTGTCAAAGATAAGTAAAAGTTAATTGATATTAATAAATTATTAGAGATAATTTACTTAGTAAAAGCTTCTAACTCTTCTTGTGTTCATTTTTTTTTCTTTTTCTTCTTGTGTTGGATTGCAGCATTCTGCTCTTCTGATGATGCGCTGTGACCCTGCAGTAGCGCAAAGGCTGCGCAGCGTTAATGCGCATTGCGTGCGAATGAACCCTGTGAACGGTTGACTAGATGAGTAATCTGATTGACTGGCTCCCTCAGTCTATTCTGTAGCCTTTTTTGGATAAAATTGGGTTTTTAACATACCTCGAGTCCAATAATCTCATTAAACAAATATTCTCCATGGGCCTGTCTAGTAGATTAAATGGATCTGGTTGGCCGTTTGTCTGCGTCTAGGGGTGTTCTATGTAGCGCAGCAGTTTCGCAGCGATTGCGCAGTCGATGCTGTTAGGTTGCGCAAGCGATGTTTGCCTCGCATTACAGGGACCTCAACCTAGGTGCAATCCTGTCTATGTAGAGTTTCAGCTTCAGTCTCCTTGGGAGACGGGGCATTGTGAGAATGTAACTTAAAGCCTGGCTTTATGATATCCTACTTGGCAGAAAGACATTTTTCTCCTCAGTAGCATAGTTTTGATGTTAGTGAGGAACATTGTTGAAGAGCAGCATTTCCCAAATGTGTTTCATAGTATTCTAATAAAATGCCCAATGAAAGAAGAGTTCCATGGTCAACTAAGTTCAGGGAACCTGTACACTATTAAAGGCTTAGGGAAAGTCCAGTAAAGAAACCTATTTTCCGAATTTATTTGATCATGAACTCCTTTTTTTTCAGCCATACCTCTTAACACCTCATAGAACACACTTCCGGAACAGTGGGGGTAGGAAAACTCGGCCTCAAGTTGCGCCCTCTAGGTAGCACTTGAAAACATGACAAGGGCCCGTAGTTGTTTGGATAAGAGAACTCCAGCATAGAGCCTTATAGCAACTGACTTCCCAGTTAAGTCCCAGTGTAAGGGTTGGTCTTTGGTTGGCAGAACTGAACATGGTGGTTTGCATTGGGTTCTGGTGGCGCAGGCGCAGGAGCAGCCAGCTGTGGCAGCGCATTAGTTTTGGCGCAAGCGAGCCTATGCTGCAGGGTCACTTTTGGCTGGTCAGAGAAGGAATAATGATATCACCTTCTTCCCCCTCCCCCAATCTTTTTTTTTTCCCTTTTACAAATTTTCCCTTTTCCCTTTTCCCTCCCATCTTCTTTTATTAAACCCCTCCTAAGGCATGTTATTTGAAAGCAATTGAGACGCAACCGAACTTTGCAGTAGCTTGGAGTAATCTTGGCTGTGTTTTCAATGCACAAGGGGAAATTTGGCTTGCAATTCATCACTTTGAAAAGGCTGTACCCCTTGACCCAAATTTTCTGGATGCTTATATCAATTTAGGAAATGTCTTGAAAGAGGCACGCATTTTTTGACAGAGCTGTGGCAGCTTATCTTTCGTGCCCTAAGTTTGAGTCCAAATCACGCAGTGGTGCACGGCAACCTGGCTTGTGTATACTATGAGCAAGGCCTGATAGATCTGGCAATAGACACCTACAGGCGGGCTATCGAACTACAACCACATTTCCCTGATGCTTACTGCAACCTAGCCAATGCTCTCAAAGAGAAGGGCAGTGTGCTGAAGCAGAAGATTGTTATAATACAGCTCTCCGCTGTGTGCCACCCATGCAGACTCTCTGAATAACCTAGCCAATATCAAACGAGAACAGGGAAACATTGAAGAGGCAGTTTCGCTTGTATCGTAAAGCATTAGAAGTCTTCCAGAGTTTGTCTGCTGCCCATTCAAATTTAGCAAGTGTACTGCAAGCAGGGAAACTGCAGGAAGCTCTGATGCATTATAAGGAGGCTATTTCGAATCAGTCTACCTTTGCTGATGCTACTCTAATATGGGAAACACTCTAAAGGAGATGCAGGATGTTTCAGGGAGCCTTGCAAGTGTATACGCGTGCCATCCAAATTAATCCTGCATTTGCAGATGCACATAGCAATCTGGCTTCCATTTCATAAGGATTTCAGGGAATATTCCAGAAGCCATAGCTTCTTACCGCACGGCTCTGAACTTAAGCCTGATTTTCCCTGATGCTTATTGTAACCTTGGCTCATTGCCTGCAGATTGTCTGTGATTGGACAGACTATGATGAGCGAATGAAGAAGTTGGTCAGTATTGTGGCTGACCAGTTAGAGAAGAATAGGTTGCCTTCTGTGCATCCTCATCATAGTATGCTATATCCTCTTTCTCATGGCTTCAGGAAGGCTATTGTCTGAGAGGCACGGCAACCTGTGCTTAGATAAGATTAATGTTCTTCATAAACCACCATATGAACATCCAAAGAACTTGAAAGCTCAGTGATGGTTCGGCTGCGTGTAGGATATGTGAGTTCCGACTTTGGGAATCATCCTACTTCTCACCTTATGCAGTCTATTCCAGGCAATGCACAATCCTGATAAATTTGAGGTGTTCTGTTATGCCCTGAGCCCAGACATGGCACAACTTCCGAGTGAAGGTGATGGCAGAAGCCAATCATTTCATTGATCTTTCTCAGATTCCATGCAATGAAAAGCAGCTGATCGCATCCATCAGGATGGAATTCATATCCTTGTAATATGAATGGCTATACTAAGGGCGCTC

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FIGURE 801B

GAAATGAGCTTTTTGCTCTCAGGCCAGCTCCTATTTCAGGCAATGTGGCTGGGATACCCTGGGACGAGTGGTGCGC
TTTTTCATGGATTATATTATCACTGATCAGGAACTTCGCCAGCTGAAGTTGCTGAGCAGTATTCCGAGAAATTGG
CTTATATGCCCCACACTTTTTTTTATTGGTGATCATGCTAATATGTTCCCTCACCTGAAGAAAAAGCAGTCATCG
ATTTTAAGTCCAATGGGCACATTTATGACAATCGGATAGTTCTGAATGGCATCGACCTCAAAGCATTCTTGATA
GTCTACCAGATGTGAAAATTGTCAAGATGAAGTGTCTGATGGAGGAGACAATGCAGATAGCAGTAACACAGCTC
TTAATATGCCTGTTATTCTATGAATACTATTGCAGAAGCAGTTATTGAAATGATTAACCGAGGACAGATTCAAA
TAACAATTAATGGATTGAGTATTAGCAATGGACTGGCAACTACTCAGATCAACAATAAGGCTGCAACTGGAGAGG
AGGTTCCCGTACCATTATTGTAACACCCGTTCTCAGTACGGGTTACCAGAAGATGCCATCGTATACTGTAAC
TTAATCAGTTGTATAAAATTGACCCTTCTACTTTGCAGATGTGGGCAAACATTCTGAAGCGTGTCCCAATAGTG
TACTCTGGCTGTTGCGTTTTCCAGCAGTAGGAGAACCTAATATTCAACAGTATGCACAAAACATGGGCCTGCCCC
AGAACCGTATCATTTTTTTCACCTGTTGCTCCTAAAGAGGAACACGTCAGGAGAGGCCAGCTGGCTGATGTCTGCT
TGGACACTCCACTCTGTAATGGGCACACCACAGGGATGGATGTCTCTGGGCAGGGACCCCCATGGTGACTATGC
CAGGAGAGACTCTTGCTTCTCGAGTTGCAGCATCCAGCTCACTTGCTTAGGTTGTCTTGAGCTTATTGCTAAAA
ACAGACAAGAATATGAAGACATAGCTGTGAAGCTGGGAACTGATCTAGAATACCTGAAGAAAGTTTCGTGGCAAAG
TCTGGAAGCAAAGAATATCTAGCCCTCTGTTCAACACCAAACAATACACAATGGAAGTAGAGCGGCTCTATCTAC
AGATGTGGGAGCATTATGCAGCTGGCAACAAACCTGACCACATGATTAAGCCTGTTGAAGTCACTGAGTCAGCAT
AAATAAAGACTGCACAGGAGAATTACCCCTAAAAAAGGGCGGCCGAGGGAAGTAGATAACATA
CTTCTTACTTGTCTGTACAGTACCTTGTTGCAGATGGGTGATATATAATGGTAATAGAATAGCACAGCCAGACTT
GCTTCCTGCATGGTAGGGAGAGACACAAAAGATGGGAACTGCTTTTCCACAAGGAATCTCCGTAGAATTTTGCG
GCGACCAGATGGTGCATAGGTCTGGAAGGTCTGATCTCCCTTGGTCTTCATGGGATGGTTAGTGTGGAGGGGAG
ATATAGATTGTCCGCGCGCTTTGTGATTCCATGGATTGATTGAGTCTTCTGGATTTTTTTTTCTTTATATTTTGG
GTACTGGAGCTTTTAAAAATGTTTGGTTTTAGGTATTTTTATTTCATGTGAAGTGTATATGATTCTCTTGAGATAA
GGTTTTAAGCTAAAATGTTACTCCCTGTTTTAGTTTTCTGAACTCTGACAGATTGACAGGGACTTTGCTGGTGTAG
TCTTTTTATAGGTTTTATAAACCCTTGAGCCTATATCAGTCGTTTTAGTGTCTGACCTAATATTTGGAGCTATC
AGTGCTTTGTTGATTTAGATGATGACTCAAGATTTTTCTGGTCCATTTCCTTTCTTCCCTGACCCC
CATACCCCTACCCCTTAAATTTCTCTGTAACCACTAACAATAAAGCCTGATTCAAAACATCCTAGGGTGTT
TTAAACACACCATCTGGTGCCAAATGAAGATTTTTAGGAGTGATTACTAATTATCAAGGGCACAGTTGTGGTACT
GTCATTGATAATAATATAGTTTTTTTTTTTTCTAAAAAAGGGCGGCCGAGGGAAGTAGATAACATA
AATAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 802

MLQGHFWLVREGIMISPSSPPPPNLEFFFLQIFFFPFTSFPSHLLSLTPPKACYLKAIETQPNFAVAWSNLGCVF
NAQGEIWLAIHHFEKAVTLDPNFLDAYINLGNVLKEARIFDRAVAAYLRALSLSPNHAVVHGNLACVYYEQGLID
LAIDTYRRRAIELQPHFPDAYCNLANALKEKGSVAEAEDCYNTALRLCPTHADSLNNLANIKREQGNIEEAVRLYR
KALEVFPEFAAAHSNLAASVLQQQGLQEALMHYKEAIRISPTFADAYSNMGNLTKEMQDVQALQCYTRAIQINP
AFADAHSNLAASIHKDSGNIPEAIASRYTALKLKPDPDAYCNLAHCLQIVCDWTDYDERMKKLVSIVADQLEKNR
LPSVHPHSMYLYPLSHGFRKAIAERHGNLCCLKINVLHKPPYEHKDLKLSDGRLRVGYVSSDFGNHPTSHLMQS
IPGMHNPDKFEVFCYALSPDDGTNFRVKVMAEANHFIIDLSQIPCNGKAADRIHQDGIHILVNMNGYTKGARNEF
ALRPAPIQAMWLGYPGTSGALFMDYIITDQETSPAEEVQYSEKLAYMPHTFFIGDHANMFPHLKKKAVIDFKSN
GHIYDNRIVLNGIDLKAFDLSLDPVKIVKMKCPDGGDNADSSNTALNMPVIPMNTIAEAVIEMINRGQIQITING
FSISNGLATTQINNKAATGEEVPTIIVTTRSQYGLPEDAIVYCENFQLYKIDPSTLQMWANILKRVNSVLWLL
RFPVAGEPNIQQYAQNMGLPQNRIIFSPVAPKEEHVRRGQLADVCLDTPLCNGHTTGMDVLWAGTPMVTMPGETL
ASRVAASQLTCLGCELELIAKNRQEYEDIAVKLGTDLEYLKKVRGKVWKQRISPLFNTKQYTMELERLYLQWWEH
YAAGNKPDMIKPVEVTESA

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FIGURE 803

GGAGGAGGAAGCAAGCGAGGGGGCTGGTTCCCTGAGCTTCGCAATTCCTGTGTGCGCTTCTGGGCTCCCAGCCTGC
CGGGTCGCGATGATCCCTCCGGCCGGAGCTGGTTTTTTTGCCAGCCACCGCGAGGCCGGCTGAGTTACCGGCATCC
CCGCAGCCACCTCCTCTCCCGACCTGTGATACAAAAGATCTTCCGGGGGCTGCACCTGCCTGCCTTTGCCTAAGG
CGGATTGGAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAG
ACGAGACTCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAAAATGTCTCAG
AGCAACCGGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGT
GATGTGGAAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGC
AACCCATCCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGGCCACAGCAGCAGTTTGGATGCCCGG
GAGGTGATCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCACGAGTTTGAAGTGCAGTACCGGCGG
GCATTGAGTGACCTGACATCCAGCTCCACATCACCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAAT
GAACTCTTCCGGGATGGGGTAAACTGGGGTGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGA
AGCGTAGACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTA
GAGCCTTGGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAATCTATGGGAACAATGCAGCAGCCGAGAGC
CGAAAGGGCCAGGAACGCTTCAACCGCTGGTTCCCTGACGGGCATGACTGTGGCCGGCGTGGTTCTGCTGGGCTCA
CTCTTCAGTCGGAAATGACACAGACACTGACCATCCACTCTACCCCTCCACCCCCCTTCTCTGCTCCACCACATCCT
CCGTCCAGCCGCCATTGCCACCAGGAGAACCCTACATGCAGCCCATGCCACCTGCCCATCACAGGGTTGGGCC
CAGATCTGGTCCCTTGCAGCTAGTTTTCTAGAATTTATCACACTTCTGTGAGACCCCCACACCTCAGTTCCCTTG
GCCTCAGAATTCACAAAATTTCCACAAAATCTGTCCAAAGGAGGCTGGCAGGTATGGAAGGGTTTGTGGCTGGGG
GCAGGAGGGCCCTACCTGATTGGTGCAACCCCTTACCCCTTAGCCTCCCTGAAAATGTTTTCTGCCAGGGAGCTT
GAAAGTTTTTCAGAACCTCTTCCCCAGAAAGGAGACTAGATTGCCTTTGTTTTGATGTTTGTGGCCTCAGAAATGA
TCATTTTCCCCCACTCTCCCCACACTAACCTGGGTTCCCTTCCATCCCTACCCCTAAGAGCCATTTAG
GGGCCACTTTTGAAGTAGGGATTAGGCTGCTTGGGATAAAGATGCAAGGACCAGGACTCCCTCCTCACCTCTGGA
CTGGCTAGAGTCCTCACTCCAGTCCAAATGTCTCCAGAAGCCTCTGGCTAGAGGCCAGCCCCACCCAGGAGGG
AGGGGGCTATAGCTACAGGAAGCACCCCATGCCAAAGCTAGGGTGGCCCTTGCAGTTCAGCACCCACCTAGTCCC
TTCCCTCCCTGGCTCCCATGACCATACTGAGGGACCAACTGGGCCCAAGACAGATGCCCCAGAGCTGTTTATGG
CCTCAGCTGCCTCACTTCCCTACAAGAGCAGCCTGTGGCATCTTTGCCTTGGGCTGCTCCTCATGGTGGGTTTCAAG
GGACTCAGCCCTGAGGTGAAAGGGAGCTATCAGGAACAGCTATGGGAGCCCCAGGGTCTTCCCTACCTCAGGCAG
GAAGGGCAGGAAGGAGAGCCTGCTGCATGGGGTGGGGTAGGGCTGACTAGAAGGGCCAGTCCCTGCCTGGCCAGGC
AGATCTGTGCCCCATGCCTGTCCAGCCTGGGCAGCCAGGCTGCCAAGGCCAGAGTGGCCTGGCCAGGAGCTCTTC
AGGCCTCCCTCTCTCTTCTGCTCCACCCTTGGCCTGTCTCATCCCCAGGGGTCCCAGCCACCCGGGCTCTCTGC
TGTACATATTTGAGACTAGTTTTTATTCCTTGTGAAGATGATATACTATTTTTGTAAAGCGTGTCTGTATTTATG
TGTGAGGAGCTGCTGGCTTGCAGTGCAGTGCAGTGCAGTGGAGAGCTGGTGGCCGGAGATTGGACGGCCTGATGCTCC
CTCCCTGCCCCTGGTCCAGGGAAGCTGGCCGAGGGTCTGGCTCCTGAGGGGCATCTGCCCTCCCCAACCCCC
ACCCACACTTGTTCAGCTCTTTGAAATAGTCTGTGTGAAGGTGAAAGTGCAGTTCAGTAATAAACTGTGTTTA
CTCAGTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 804

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATGHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAMATYLNHLEPWIQENGWDTFVELYGNNAAESRKGQERFNRFWFLTGMTVAGVVL
LGSLSRK

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FIGURE 805

GGCACGAGGCGTCCCGGCGCCACTCGGCCCAGGGCAGGGACCCCGCCACGGCCGGGACCGCCGGCCCGGCCCA
GCCCCGCGCTCTCCGCGCCGCCCCGCGCTCCGCACCGCGCCCTCTCCGCGTCCCCGCGCGCGGCCGGACCGGG
CAGCCAGAAAAATCATTTTTCTTCTCTGGGAAGGTGAACATTTGTAGCATTGATTTCCCGGATCTGGTAAC**ATGG**
CAAAAGATGCCGGTCTAATTGAAGCCAACGGAGAACTCAAGGTCTTCATAGACCAGAACCTTAGTCCCAGGAAAAG
GCGTGGTGTCCCTCGTGGCCGTTACCCCTCCACCGTCAACCCGCTCGGGAAGCAGCTCTTGCCAAAAACCTTTG
GACAGTCCAATGTCAACATTGCCAGCAAGTGGTAATTGGTACGCCTCAGAGACCGGCAGCGTCAAACACCCCTGG
TGGTAGGAAGCCACACACCCCCAGCACTCACTTTGCCTCTCAGAACCAGCCTTCCGACTCCTCACCTTGGTCTG
CCGGGAAGCGCAACAGGAAAGGAGAGAAGAATGGCAAGGGCCCTACGGCATTCTCCATGAAGGTCTGCGAGAAGG
TGCAGAGGAAAGGGACCACTTCTTACAACGAAGTGGCAGACGAGCTGGTTGCGGAGTTCAGTGCTGCCGACAACC
ACATCTTACCAAACGAGTCAGCTTATGACCAGAAAAACATAAGACGGCGCGTCTACGATGCCTTAAACGTGCTAA
TGGCCATGAACATCATCTCCAAGGAGAAGAAGGAGATCAAGTGGATTGGTCTGCCACCAACTCGGCTCAGGAAT
GTCAGAACTTAGAGGTGGAAGACAGAGGAGACTTGAAAGAATAAAACAGAAACAGTCTCAACTTCAAGAACTTA
TTCTACAGCAAATTGCCTTCAAGAACCTGGTGCAGAGAAACCGGCATGCGGAGCAGCAGGCCAGCCGGCCACCGC
CACCCAACCTCAGTCATCCACCTGCCCTTCATCATCGTCAACACCAGCAAGAAGACGGTCATCGACTGCAGCATCT
CCAATGACAAATTTGAGTATCTGTTTAATTTTGACAACACATTTGAAATCCACGATGACATAGAAGTGCTGAAGC
GGATGGGCATGGCTTGCGGGCTGGAGTCGGGGAGCTGCTCTGCCGAAGACCTTAAATGGCCAGAAGTCTGGTCC
CCAAGGCTCTGGAGCCATACGTGACAGAAATGGCTCAGGGAACGTGTTGGAGGCGTGTTTCATCACGACGGCAGGTT
CCACGTCTAACGGCACAAGGTTCTCTGCCAGTGACCTGACCAACGGTGCAGATGGGATGCTGGCCACAAGCTCCA
ATGGGTCTCAGTACAGCGGCTCCAGGGTGGAGACTCCGGTGTCTACGTCGGGGAGGACGACGAGGAGGACGATG
ACTTCAACGAGAATGACGAGGACGACT**TGAC**GTCTCTCCCACTTCAGATTCCGGCTTCAGGAAAACGTTTAGCGAAA
AGAACTTTTTTTTTTAATGTGGGTTTTCTGTTTCCTTTTGGCCTACTCCCAAGAAGATATTGGTAAGCTATTGAA
TTTAGATATGCACCTCTGATAAGCAAGGATTGTTTCCCGTAGGATTAGGACGTGCTGTGGATGTGTGTTTTGATA
CCAGTGTGCTGATGCAGAGCGTTTATTTAGTTGTTAGGATTTTGTGTTTTTCATTTGCTATTTTTCTTTAAGTGCA
GAGTTCATTTTTGCCCCGTGAAAAGTTTTTGCTGAGTTTGCTGAAGAAATTGTATTTCAACCACATCCATGAAAAAT
AAAACACCTCCTGTTGTGGATGGTGAGCCCCTGATGCCGCTTATTTGCCGTGAGTTTGGACGGCACCCCTGCTGG
CGGATAGCAAGACTCTGTGGAGTTTGTTCAGTGGTACGGTGTCCAAGCAAACAGCAGAATGCAACTTTCTAAACA
GCCCCAAGCAAACAGCAGAATTCAACTTTTTTAAACAATAAACACCATCAACCTTATTGACTTTATTGTCCCTTAA
ATTATATTGACTGTTGTGATTCCATCAAGTTTGTACACTCTTTCTCTCCCTGTTTTGCAGCAACAAATTGCGAA
GTGCTTTTGTGTTGTTTGTTCGTTTGGTTAAAGCTTATTGCCATGCTGGTGC GGCTATGGAGACTGTCTGGAAG
GCTTGGAATGGTTTATTGCTTATGGTAAAATTTGCCTGATTTCTTACAGGCAGCGTTTGGAAACCTTTTATTATA
TAGTTGTTTACATACTTATAAGTCTATCATTTAAAGACATGTACTGAAACAAATGTATTTGTTTCATAAGCATCT
TCCTGTAAATCTATTATAAAATTGAAATTAAATATAGAGAATGTTTAAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 806

MAKDAGLIEANGELKVFIDQNLSPGKGVVSLVAVHPSTVNPLGKQLLPKTFGQSNVNIAQQVVIGTPQRPAAASNT
LVVGSPTHPTSTHFASQNQPSDSSPWSAGKRNKGEKNGKGLRHF SMKVCEKVQRKGTTSYNEVADELVAEFSAAD
NHILPNESAYDQKNIRRRVYDALNVLMAMNII SKEKKEIKWIGLPTNSAQECQNLEVERQRRLERIKQKQSQLQE
LILQQIAFKNLVQRNRHAEQQASRPPPPNSVIHLFFIIVNTSKKTVIDCSISNDKFEYLFNFDNTFEIHDDIEVL
KRMGMACGLESGSCSAEDLKMARSLVPKALEPYVTEMAQGTVGGVFITTAGSTSNGTRFSASDLTNGADGMLATS
SNGSQYSGSRVETPVSYVGEDDEEDDDFNENDEDD

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FIGURE 807

ACTTATACATCTGTAAAGGTGGTTTCAGGGACCTTTCTGAACTTAGCCCGTATCTCACTGGTGATCCCACTTCTG
GGTATTTGCAAATCACTTTATTAGGTTTTTAAAAGTATTGTTGCAGGCATGCGAAGGGGGCCGATATACTTTTGCC
ATGTCCAGAGTGTATTTCAGGTCTTGTAATGATCATATGGGTGTAATATTGAGTAACAGGCCAAATGTGGGCAGAAA
ATATCAAATGTGGTTTTTCAGCTAAGAAGTCTGGTTGCTCTTAATTTTCAGTTACTCTCCATTGCATAGAATAAAG
CCCCGAAGAAACGAAGAATAAGATCATGGGGAAACTTGGCTTCCATGTTAAACCGTGTAATACCAGGTGTTAGAA
TAGTAGTAAAGGACTTGTTTTCTTTCACATCTATATACACTCAAAGACCTCATCGATCTTGGAAAAACATTGTTT
CGAAGACAATGTGTATGACTGATTGGTTATATGAAGAAATTATTTCTAGGATTTCTTGTAATTCTGTGATAAA
CAGTAATACAACTGGAATTTTTACAGGTCACTATAGTAGAGGTTTTAGTTTGATTTTGTCTTGCCTGTCATGC
TCTCTCTGCCTTATAATTCTTTGTGGTGTAATTAACAAACGAACACTNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNTGCAAACACATTTTAATTGACAACACTAGGGCTGTTGTACAAAATAGTAATGATAGCCATGGAAG
TTTTACCTTATTCTGTGAGAAAGTGTCTTAACTTATTAAGTGTCTAACTAAGGTTTAGTGCTTTTTTAAAGGA
AAGTTGTCCCAGGATTCATCCTAAAGAAAGCAAAAGTTAATTCAACTGATCCACCAATGGAATTAGATGGGTAGA
GTTGGGTTCTTGAGTTTTACCACCACCTTAGTTCCCACTGAATTTTGTAACCTCCTGTGTTTGCATCCTCTGTTCC
TATTCTGCCCTTGCTCTGTGTCATCTCAGTCATTTGACTTAGAAAGTGCCCTTCAAAGGACCCTGTTCACTGCT
GCACTTTTCAATGAATTAATAATTTATTTCTGTTCTAGTGGGAATGTGTCCTTTGTTTTAGTTTACAAGTAGTAAT
TTTGACAAGATGCTTTCTTCTGATGCAGTTTGTTTTAATCACTCACCTAGTACTAGAAATGGCTTTCTAGTCAGA
TCCTATAGTCTCTACCTGTATAGCTCTTACATACA

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FIGURE 808

MLSSDAVCFNHSPSTRNGFLVRSYSLYLYSSY

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FIGURE 809A

CCGTCCCGGGGCGGACGGGCGGGCGGGAGGATCGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGT
ACCTGGAGCGCAGGGATCGAGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGG
AGAAAACAAAGGCGGGCCGGCTGGTGCACAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACA
GACGAGCCAAACTCAGGCTGTACCTTGAGCAGCTCAAGCAACTGGTGCCCCCTGGGCCCCGACAGCACCCGCCACA
CCACGCTGAGCCTCCTGAAGCGGGCCAAGGTGCACATCAAGAACTGGAGGAGCAGGACCGCCGGGCACTGAGCA
TCAAGGAGCAGCTGCAGCAGGAGCATCGTTTCTGAAGCGGCGCCTGGAGCAGCTGTGGTGCAGAGCGTGGAGC
GCGTGCGCACAGATAGCACGGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGG
AGTTTGGCCCTGGTGAGCTGGACAGTGTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCA
CCGGCGGCGACAGTGGCTTCGGGCCCCACTGCCGGCGGCTGGGCGGCCCGCCCTCTCGTAGGCCCCGTGCCCTCT
GCTCCTTGGCCTGCCTGCCCGCCAGCCACGCGTGTACGCCCTCCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCA
CAGGCCCCACTGCTGTGCCATTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGG
GCCTGCCGAGCTGCCTGCCCTTTCAGCTGGGCAGAGTCCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCCGG
AGCCCTGGTCAGCATAGCCGCCACGGTCTGTTCTCAGATTCTAATCATTCCAGAAGTATTAAACGTCATTGCT
GCAAACTCGGCAGGTGCCGTGTGAGGGGCTTAATGACCACCACAGGGAGCTCAGACCCCAACCCTGGATCCAG
GAGAAAAGGAGTGGACCGAGGAAGGAAGGAAGGAAGGCTGTCTGTCCATCCGTCCGTCTGTCCACCTACCTGTCA
GTCCACATAGGCTCCTGGCGTGGACAAGGGGCTGTGAAGGGCGGGAACGGGTGAGCACCTGGGGCAGGTGGGT
GGTTAAGTCCCTTCCCACTTCGAGGTGTGACAACCTAGGGCTGGGCTCTCGGGGCCAGGCAGGCCAGCCAGCC
CACGCCGAGCTGGGCAGCGTCTGCTCTGGTAGGACTGTCAGACGCACACGCGCACGCACCTAGACACACCCACTC
ATGTACATGCTCACACATGCAGACACACCTGGGCGTCCCGAGGTACATGTTCTGGGGATGATGGCCTTCAGGGG
TCATCTGGCAAACAGCCCTGGGCTGTGCCTGGATCCCCCTCTAGCTCCTGCTCACCACGCCACCCAGTAGTC
CTGCCTGTCTGCACAGGAGAGGGGCTTCTCTTCTGGCTGGGGCTGGGGTGAACCTGGAGGCTGGTTAAGTTGCAG
CCGCTGGGTCCCTCGGGGGCTTACTCATCTCCCTTTTTTAAACAAAAAGCAAAAAAGTAAAATGCTGCACTGCCCA
GCAGCCCGTTAGGGCTCCTGGAGCCACCTTAGGAAAGGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CAGAGAGGCTTTCCAGAAAAAAGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CGTCCGTGTGTGCCGCTCTGTTTCTGTACAGATTTTGTATTCTATTTTCTAGCTGTTGTTGCGTCCCTGT
TTGTGTCAGGGCTTGCCCTTCCCACAGCATGTCCCTCGTGGCTCAGGGTGCCCCAGGCCTGCCAGCTAGTGCT
GTCCCTCCATCTCCTGTGGGAGCCCTCCCGGCAGCCAGGGCTTCTGGAGGCGATGCAGCCAGGCCCCCTGTGG
GTGGCAGGAGGGGCTGTGACCTGGTCCCCAGTGTGGCCTCCCCAGTGGCTGGCAGGGGCTGCTTGCTCACTA
GAGAGATGGATTCTCACCTGTACCTGACTCGAGCCCCCTGCTTCTGGCCTAGGCGAGGGTTCCAGGTTTCAGA
CACTGGCAGCCAATGAAGACTGTGCTCGCTGGGTGGTGCAGGCCTGGCACCAGGAGGCTTGCACCCGCCTTCTCT
TCCTGACGTCTCTGTCTTGGGGCTGGCCCATAGCAGTGCCTGCCGTGCCTCTGGTACATCTGTAGCCAATTCC
CATATCATGGGGAAATTCTGTGTCTATTTTTCAGTCTGACGCATAGACGCCCCAGGATGGGGGGCCCACTGTGGCG
GAAGGGGGTCCCTGGAAACAACCTCTGGCACAGAACCTGCCCTGCAGGCTGTAGGGGGCATGGTGCCTGGAGCTGA
GGGGCATCCGAACGCGTTGCGGGTGGTTGTGAGGAGGCTGTCTGCATCTCCTTCCGGCCCCACTGGGGTCCAGG
GGTGCCAGAAAGGAGCTTCCCTGCCTGCCTGAGTCTGTCCCCCAGGCTTCATTTCAAACACCGTGGCACCTC
CGAGCAAGGCGGGCCGTGTGTAAAGCTTGCTTCCCCAGCCAGCACTGCAGGGCCCTGAGGTGGTCTGTCTCCCTG
CCCTCAATTCTTGAAGCACCAGCTCCCTGCCCCACCTCCAGTGCCTGAGGCAGCTAGGGGCTTCTGCTCTCATC
TCTGACCAGCAGAATCCACCCGGTGACAGTGGTGGCCCCCTCAGCCACCTCCCGGCAGCTCAGCCTGTGGCTC
TTGAGGCCGTGGTTCCCACGTGGACTGGGAGGCAGTCTCAGCCACCCGGGGTGTGTTTCACTGCCCCCTCCCTGC
CATCAGCAGGTGGGTGAGGGGTTGCCCACTGGGTGGGGGCGCGTCTAGGAGTCAACCATGCTCCAACCTCCCA
CTGCTCCCTGTCAGGGGGCCAGGCTGCCATCACTGGAGGCTGCAGGGACCAAGAGGCCATCACCGTGTCTATAGA
GAGCAGACAGAAGCAGAACAGAGCCGGGGCTCCTGAGCCTCTGCGTGTGCCCTCCAGCCACACCAAGTGTCT
CGGCCACTGAGCACCCAGACTCAGGCTTGGGTTCACAGCCTTATTGGAAGGCAGCTCCCGCATACCAAGGATAAC
CCCCGCAAACCATAGCAGACCCCGCCATCCTCGCAGAGTGGGAGAGGCTGCAGCAAGGCTTTGCCTCTGCAG
ACCCCATCTTAGTGGCACGGTGTGGGCTGTGTCCCGGGTGGTGGAAACCTGTACCGGTCTGTGGCCCTAGG
GTCCCTGCTCTGTCTGCCCGGGCCGTGTGTCCGCTGGGTGAGGCAGGCTCCCCCGTGCCCTGCCTCCCTCTGT
CAGGGAACCTGGGACCCCTCCCACTGCCTGCACAGAGGACCTGACCTCGGCCAGCAGGGTGGCCCCAGGTC

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FIGURE 809B

CATGTTGGGCACTAGGGCAGGTTCCGTGCCAGAGTCGGGGGCCACACGAGGGCCTGGTGCCGGTGAGGGGGGCGT
GCGCTAGAGGGGGAAGGGCCCCGGCCACCTGTCCACCGTGTGGGCCGTGCTGTGTCCTTATGTCATTGTAAT
ATAAATACAGATTTTTATATCTC

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FIGURE 810

MELNSLLILLEAAEYLERRDREAHEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRRLYLEQ
LKQLVPLGPDSTRHTTLLSLLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSSDADDHYSLSQSGTGGDSGFGPHCRRLGRPALS

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FIGURE 811

CGCGGGCGGGAGGATGGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGTACCTGGAGCGCAGGGATCG
AGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGGAGAAAACAAAGGCGGCCGG
CCTGGTGCGCAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACAGACGAGCCAAACTCAGGCT
GTACCTTGAGCAGCTCAAGCAACTGGTGCCCTGGGCCCCGACAGCACCCGCCACACCACGCTGAGCCTCCTGAA
GCGGGCCAAGGTGCACATCAAGAAACTGGAGGAGCAGGACCGCCGGGCACTGAGCATCAAGGAGCAGCTGCAGCA
GGAGCATCGTTTCCTGAAGCGGCGCCTGGAGCAGCTGTCGGTGCAGAGCGTGGAGCGCGTGCGCACAGATAGCAC
GGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGGAGTTTGGCCCTGGTGAGCT
GGACAGTGTTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCACCGGCGGCGACAGTGGCTT
CGGGCCCCACTGCCGGCGGCTGGGCGCCCCGCCCTCTCGTTAGGCCCCGTGCCCTCTGCTCCTTGGCCTGCCTGCC
CGCCAGCCACGCGTGTGAGCCCTCCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCACAGGCCCACTGCTGTGCCA
TTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGGGCCTGCCGAGCTGCCTGCC
CCTTCCAGCTGGGCAGAGTCCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCC

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FIGURE 812

MELNSLLILLEAAEYLERRDREAHEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRLYLEQ
LKQLVPLGPDSTRHTTSLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSDADDHYSLSGTGGDSGFGPHCRRRLGRPALS

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FIGURE 813A

GTTGGAGCGGCGCTGCTCGGCCGCGGACACACGAGGGACGCGCCCCGAGGAGCTGCAGGTGGCAGCCCAGGCGGTC
CGAACCCGTCGGCCGCGCGAGCCTGGAGTATTGCCTAAGTGTAATCTTGAACATGGCGGCTGCTGTGAGTGCTGG
TGAAGACAATGAAGAGCTGATAGATAATTTGAAAGAAGCACAGTATATCCGGACTGAGCTGGTAGAGCAGGCTTT
CAGAGCTATCGATCGTGACAGACTATTATCTTGAAGAATTTAAAGAAAATGCTTATAAAGACTTGGCATGGAAGCA
TGAAACATTACCTCTCAGCCCCGTGCATCTACTCGGAGGTGATGGAAGCCCTAGATCTGCAGCCTGGACTCTC
GTTTCTGAACCTGGGCAGTGGCACTGGGTATCTCAGCTCCATGGTGGGCCTCATTCTAGGTCCTTTTGGTGTGAA
CCATGGGGTGGAACTTCACTCAGATGTGATAGAGTATGCAAAGCAGAACTGGACTTCTTCATCAGAACAAGTGA
TAGTTTTGACAAGTTTGACTTCTGTGAACCTTCCTTTGTTACTGGGAATTGCCTGGAGATTTCTCCGGATTGTTC
TCAGTATGATCGTGTATACTGTGGGGCTGGCGTGCAGAAAGAGCATGAAGAGTACATGAAGAATCTTCTCAAAGT
GGGAGGGATCCTTGTCTATGCCACTGGAAGAGAAGTTGACTAAGATAACACGCACAGGTCCTTCAGCTTGGGAAAC
CAAAAAGATTCTTGCTGTTTCTTTTCTCTCTGATCCAGCCCTGCCATTCAGAGTCAGGAAAATCAAGACTTGT
CCAGTTACCACCAGTGGCAGTTTCGCAGCCTCCAGGACTTGGCTCGCATCGCCATCCGGGGCACCATTAAAAAGAT
TATTCATCAGGAACTGTGAGCAAAAACGGAACGGACTAAAGAACACCCCCAGGTTTAAACGAAGGAGAGTTTCG
CCGCCGTGCAATGGAAACGATTGTCTTTTTTGGACAAAGAAGTCTTTGCCAGTCGGATTTCCAACCCCTCAGATGA
CAACAGCTGTGAAGACTTGGAAAGAGGAACGGAGGGAAGAAGAAGAGAAGACCCCGCGGAAACAAAGCCAGACCC
CCAGTGAACTTCCTACGCCAGAAGGTCTGAGCCTCCCTCTGCCAGATCCCCTGAAATACTACTTGCTTTATTA
CAGAGAAAAATAAGTCTCCTGTTTGAAGGGGGAAATAGGAAGAGCAGATTGCTGAGTGTGAAGTTCTGTGCTGCC
TGTGTGCTGTTGAAGGGTCACCTGGAGGCAGACGTTGTGGGGAAGGGAACTGCTGGGCTCATCCACACCATGGTT
TTCTTCTAGTTTCTGATTGACCTCTAAAATTTCTATTTCAGTTGTATGATTGTTTACATAGTTCCACAAGACCTTC
ATTGCATAGAAGATTGTTTTCCCAAAGTGGAGAGAATCTTCATAGAGAAAAAGAGAAGGCTGTTTCTTTTTTCGGC
TCTGACGAAACACTGAAGTCTGCGTAAGAGAGACTGTTTGATGACCGTCCCTCATGCAACATGCACGGTACTCAC
TAAAAATGAAAACACTGAAGTGGAACTAACCTGTGTTGCTTATAAAGTGTGAAAGCACAAGCTTATAAATGTATAA
AATCTTTTCTGGGTGTGACGCACCTGCGTCCAAGTTTGAATTTTTATGATATGTACCACTTAATTACTGGCACTG
AGTATCACTGAATTTCTTAGTTTTCTAGTGGGGAACATTATTGAGAAGCCCTCCCTTATTTTAAGTAAGTTGAT
TAAATCTTATGTGAGTTGCCAGTTGTAATTTTTCAAAGGAAAAATTTTGATGGGGTGGAGGAATGAATTGCCAGA
TAATCTTTCTGGAATTCCGAGAGAATTCCAAAGAGGGTTTTTTTTTTTTTTTTTTTAGGACATCTTTTGATACCT
TTAAAAGAACCCTGTCAAGTAATCCTTAAAAAATATCTTGGAAGGAAACAGATTTTTCTGTGTGTAAGC
AATAAGTGAAGTTACATTTGCCCTAACCTAGGGATGATTCTTTACCCAGTTTTAAAGCCCATCATGGTATTCTA
AGGTGTTGACACCCCTCATCCTCAGAGCAGGTCGAAAATATTAAATAGACTGGGGACTCTATGATGGGCAGCCTG
TGCTTTTGACTTCAGTTTGCTATTTTTCTGTGATCACATTAGTACTGATTCATAGATTCTATCTTTTATAATTC
TGGAGAAAAAGATTTGTTAGTTTTGTAATTTTTTGTAAAGACCAAATGTATGTATTTTAGTAGCTCCATTGCATG
AGAAGAGTGTAACTCACACTGACTTGTGATATCAGCCTTCTCTGGGCCTTGTGTGTGGAGAGCTTTCTATCTTAC
CAAGTGGTAGGGCTAAAAGAACAACAGCCTTTTTTGGTAGTCACATAGCAGAATGATCAGAGTTACATTGCTTATT
CCAAAACATTGGTTCTTTTTTAAACATTTTTTTTTTACCCAAAGAAAAAGAAATAATAGAAATTACTAACAATAAATA
TAAATTCAGAGTGTGATATAGGATTCAAGTATCCAGAGTTTATTTTTAATCTTAATCCTCAGCTTCTTGGGAGTT
GCTGGGCTTCAGTGTCTCTGTGGTTTTACCAGCTTAGCTTGAGCTCTGGTTATTTTGGATCTTTTCTGCTTTTTT
TAAGTAACTGAGTCATTTTTTACCACACAGTCCAGTTTGCATGTATAGCTAGGAAACATGTATTGCTCTAGATTGG
GCAGTTTAAAGTCATTTTTAAAGAAAGTTAGTTTCATAGTTGTTGCCTTTTTAACTCATAGTCAAGCTTCAGTCTTTCA
AAGAGAAAATGTGTGATTTTCAATTTACTTGCTGATATTTTGTAGTTTGGAGATCCTTGTGGGCATTATTCTAACTG
ATACGTAGACACTTACTTGGAAATTTTTTGGACATTATATTAAATGAGTGCTATCTGTGAAATTGGTTATATTAGG
TGGCTTGACTAATGTTTTTCTATAATTGTATATGGACTGCATTTTTTAAAAAACCGCATTGCTTTTATGCTAG
ATTGTAAAAAATTATATTAGAATGCATAAGACATGTTTTTCTTCATATGCTAGACTTTTCTAGCATTTCGTAT
TTCTGTGTTGTCAGTGTGTGATTTTTTAAACCGGAATTTGGTTTAAAAAAAATCTGGTGGTAATATATGTGAGAAA
TACTTTGGTGTTTACCTTATGAAAATAAAGGATTGTAAGTAAAGTTTCTGCGCACCTTATACCAGAATTCAGTA
TAATACACTACTTTCTGTTTTTCAAACAGATAAATCATAATATAGTCTGTATTATCTGTAAGATCTGTCTTGTA
CCACATTCTTGACAACATTTTGTCTTTTGAAGTAGTTTGTATTTTAAATATGTGACTTTTGTCTTGAAAAGTAGTAA
GCCATAGACTTGTGCAAAACAAGTTTCAAGTTTATAGATATTAAGTTTGTAAATGTGAGCATCAAATGTGTATGTA
AAAAACTTTTTTACCAGTCTGGAACCTGGGAAAATCCAGGGAATTTGAAACATAGATTTTAAATGAGCTGGTAAAC

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FIGURE 813B

ACAAATCATGTCAATAAAGGTAGTCAGGATATTTTATCCTTAGCATTGCTTCTGC

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FIGURE 814

MGGAVSAGEDNEELIDNLKEAQYIRTELVEQAFRAIDRADYYLEEFKENAYKDLAWKHGNIHLSAPCIYSEVMEA
LDLQPGLSFLNLGSGTGYLSSMVGLILGPFVNHGVELHSDVIEYAKQKLDFEIRTSDSFDFCEPSFVTGNC
LEISPDSCSYDRVYCGAGVQKEHEEYMKNLLKVGILVMPLEEKLTKITRTGPSAWETKKILAVSFAPLIQPCHS
ESGKSRLVQLPPVAVRSLQDLARIAIRGTIKKIIHQETVSKNGNGLKNTPRFKRRRVRRRRMETIVFLDKEVFAS
RISNPSSDDNSCEDLEEERREEEEKTPPETKPDPPVNFRLRQVLSLPLPDPLKYLLLYREK

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FIGURE 815

CGAGGGCAGCGCCGGTCGGGAGCGCAGCGCGGCGCAGCTCGGCGCGCACGGCGGGAGCGGCGCGCAGTGGTTCGG
GCCTGGCGGGCTGGACGGGCGCCCCCTCGCTGCCCCGCGCGCTCCCCGCCGCCCCCATGAGCGCAGCCCCGCGCGG
CCCGGGTCCGTAGGCGGGCGGGGCGCCCCCATGCTGCTGCAGCCCGCGCCGTGCGCCCCGAGCGCGGGCTTCCCC
CGGCCCCCTGGCCGCCCCCGGCGCC**ATGC**ACGGCTCGCAGAAGGACACCACGTTACCAAGATCTTCGTGGGCGGC
CTGCCGTACCACACTACCGACGCCTCGCTCAGGAAGTACTTCGAGGGCTTCGGCGACATCGAGGAGGCCGTGGTC
ATCACCGACCGCCAGACGGGCAAGTCCCGCGGCTACGGCTTCGTGACCATGGCCGACCGGGCGGCAGCTGAGAGG
GCTTGCAAAGACCCGAACCCCATCATCGACGGCCGCAAGGCCAACGTGAACCTGGCATATCTGGGCGCCAAGCCG
CGGAGCCTCCAGACGGGCTTTGCCATTGGGGTGCAGCAGCTGCACCCACCTTGATCCAGCGGACTTACGGGCTG
ACCCCGCACTACATCTACCCACCAGCCATCGTGACGCCAGCGTGGTGATCCCAGCCGCCCTGTCCCGTCGCTG
TCCTCGCCCTACATTGAGTACAGCGCGCCAGCCCGGCTACGCCCAGTACCCACCGGCCACCTATGACCAGTAC
CCATACGCCGCTCGCTGCCACGGCTGCCAGCTTCGTGGGCTACAGCTACCTTGCCGCCGTGCCCCAGGCCCTC
TCAGCCGCAGCACCCGCGGGCACCACTTTTCGTGCAGTACCAGGCGCCGCAGCTGCAGCCTGACAGGATGCAG**TGA**

GGGGCGTTCTGCCCCGAGGACTGTGGCATTGTACCTTCACAGCAGACAGAGCTGCCAGGCCATGATGGGCTGG
CGACAGCCCCGGCTGAGCTTTAGTGAGGTGCCACCAGCACCCGTGCCTCCGAAGACCGCTCGGGCATTCCGCCTGC
GCCCTGGGACAGCGGAGAGATGGCTTCTCTTTAATCTAGGTCCCATTTGTGTCTTGAGGGAGGACTTTAAGAATGA
CTGAGAATAATTTAAAGACGCAATCCAGGTTCTTGCACACCATGGCAGCCTCTTCTGCACCTTCTCTGCCT
CTCCACACTCCAGGTTCCCTCAGGCTTGTGTCCCCACTGCTGCATCGTGCGGGGTGTCACAGACCCTCTGCAGC
CCCTGGCTGCCCTGGACTGTGCAGAGATGCCTGACTCCAGGGAAACCTGAAAGCAAGAAGTTAATGGACTGTTTA
TTGTAACCTGATCCTCCCGAGCTGTGAGCGCAGTCTGAGGTGTGAGGACACGGCCTCCTGTTGGAGTCCCATTTT
CTCCATCAGGGCACGTGGGCGGCTTCTCAAGCCCGGAGGAGCTCCCAGGCGCACAGGGGCCGCCGTTAACAGGG
GCCGCCGGCCAAAGGCCCTTTCCAGTCATAGCACTGAAGTTGCAACTTTTTTCTTGTAATTGTTTTGCTACTAA
GATAATTTCAGAAGTTCAGTCTATTTTTTTCAGCGGATACTGCCGCCACCAAGAATCCAAAACCTATTTTTGACTT
GGAGAGACTTGCTTTTGTGTTGGTTCCGCCCGTGGAGACGACGACAGTGTTCCTGTATAATAAAGTGTCTGCCGGCT
CGCGGGCCAGGATCCTCTCGGTGGGATGGGCACCACAGACAGGAGGCCCTCAGGCCCGTGCGGGCCACTGTCTG
CTGCCGCTGCCGGGTGGCAGAGTGAGTTGTCTCAGGACCCCGTCACTGCGACGTTGACACTCTCTCCTTCCTT
CCTTCCCCAACTCCCCAAACACTGTGGAAGGGAAGAAGGAAGTGATCCACAGCATTACAGGCCACTTGGGGTCTAG
ACCATGGTGGTGCCAGCCTGGGGGGGGCAGTGGCCCTCAGCTCTGCCCGCTGGAGCGGTTGAGTGCAGAAGGGTG
CGCCTCTTCCCTCTACCCCCGCACCACCTGCTGTGTGCCAGCCTGAGACGGTTCCCTGCCCTGTCTTGGGGGTTGGT
GGAGGGTGGAGGCAGTTCTGCCAGCCGTGGCAGGGCTGCTATGGGGCATCCAGGGCTGTGGGGGTCTGGAGGAGG
GGACATGAGGTGAGAGGTATCCTGGCCGAGGGCGGGGGGCAGCGGGGGGTCTCCCTCCGGACCTACCTCAGGGAG
CTGAGCGTGCAGGCGCTCCAGGGCAGGCCTGGGACAGAGTCAAGGCTCAGAGAATAAAGGTAGCTAATCTCATCA
TAATATTTTTATTAGAATGTTCTGATGATAAAAATAAACTTGTTTTCTTT

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FIGURE 816

MHGSQKDTTFTKIFVGGLPYHTTDASLRKYFEGFGDIEEAVVITDRQTGKSRGYGFVTMADRAAAERACKDPNPI
IDGRKANVNLAYLGAKPRSLQTGFAIGVQQLHPTLIQRTYGLTPHYIYPPAIVQPSVVIPAAPVPSLSSPYIEYT
PASPAYAQYPPATYDQYPYAASPATAASFVGYSYPAAVPQALSAAAPAGTTFVQYQAPQLQPD RMQ

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FIGURE 817

GAGCCCAGCCGAGCGTCCGCCGCTGCCCGTGCGCCTCTGCGCTCCGCGCCATGGCCGGCCTCAACTCCCTGGAGG
CGGTGAAACGCAAGATCCAGGCCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG
AGCTGGACGGCGAGCGCGAGCGGGCGGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG
TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTG
CAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTCAGG
AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG
TCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG
AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA
AATATGAAGAAGAAATTAACTTCTGTCTGACAAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA
CGGTTGCAAACTGGAAAAGACAATTGATGACCTGGAAGAGAACTTGCCAGGCCAAAGAAGAGAACGTGGGCT
TACATCAGACACTGGATCAGACACTAAACGAACCTTAAGTATATTAAGCAAAACAGAAGAGTCTTGTTCCAACAG
AAACTCTGGAGCTCCGTGGGTCTTTCTCTTCTTGTGAAGAAGTTCCTTTTGTATTGCCATCTTCGCTTTGCTG
GAAATGTCAAGCAAATTATGAATACATGACCAAATATTTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA
TTCCTTCCCTTTTTTTTTTCAAATGGCACCAGCTTTTTTCAGCTCTCTTATTTTTTCCTTAAGTAGCATTTATTCCT
AAGGTAGGCAGGGTATTTCCCTAGTAAGCATACTTTCTTAAGACGGAGGCCATTGGTTCCCTGGGAGAATAGGCAG
CCCCACACTTTGAAGAATACAGACCCAGTATCTAGTCGTGGATATAATTAACCGCTGAAGACCATAACCTTTT
GGGTCAACTGTTGGTCAAACCTATAGGAGAGACCAGGGACCATCACATGGGTAGGGATTTCCATCCAGAGCCAAT
AAAAGGACTGGTGGGGGCCGGGGGTGGCTATTGTGGGAAGTCATAACCCACAGATAGATCAACCTAAGAATCCTG
GCCCTTCTCCACTCTCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA
TAATTACCCACATATAGTAATTAATAGATGGTAATTAATTGATCCTTGATGTGATGTTCTTTTGCATATTTCTT
CATTCTAAAGTTGTTCCCTGGCCGGGAGCGTTTGCTTTTCGCCTGTAATCCCAACACTTTGGGAGGGCCAGGACAGA
TCACTTGAGGTGAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAATACAAAAATT
ATGGTGACGCCTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG
ACTGCAGTGAGCCGATATCGCACACAGCGCTCCAGCCTGGTCGACAGAGTGAGACTCCATCTCAAGAAAAAATA
AAAAATAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC
AGTCCAATTGAGGTGAGCCATATCCAAAAGACCACAAGTCATTACTAAGTTGAGCAAAAGAGTTTTTATCTATTA
GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAACTGGCCCACTTCATTTCCATACTTCAGGGAACAGCAAAT
TGAGGATTTACTTATCTAGGACTT

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FIGURE 818

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ
KLEEAekaADESERGMKVienRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEEERAeVS
ELKCGDLEEELKNVTNNLKSLEAASEKYSEKEDKYEEEIKLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA
QAKEENVGLHQTLTDQTLNELNCI

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FIGURE 819A

CGGCACCGTCGTAGGTGCGGGCCGCATGAATGGAGCGCCGGGCGTAAGGCAAAGCCTGGCACCGTCTGCGCGGGC
GCTATCTGCTCCCGGAGCGTGAGTGCGGGGTGTGGGGCGTGCGCGTGCAGAGGGGGCTCAAGGCGAGCG
CGCCGGGCGAGTTGCGGGCGCTGGCTGCTGAGGTTGGCGGGCGGTGCCGCGCGCCGACGGGCCGGTGGTTGCGGG
GCCTCCCGCCTCGACCCGGGCTGGGGGCGACCGTGGCGGGCGCCGGGACCGCAAGGGGCGGAGGAAAAGGAGGGG
GCCGGTCCCGGCACGCAGAGGAGCAGCCGACCATGCCCCGAGACAACATGGCCTCCTTGATCCAACGGATCGCCC
GCCAGGCTTGCTTACCTTCCGGGGCAGCGGGGGCGGCCGCGCGCTTCCGATCGCGACGCGGCTTCTGGCGCGG
AGGCGCCGATGCAGCCGGGCTTCCCGAGAACCTGAGCAAGCTGAAGAGCCTCCTGACCCAGCTCCGCGCCGAGG
ACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGCTGCCGCCAACCTGCCGCCAGTCACCTACATGCACA
TCTACGAGACGGACGGCTTCAGCCTGGGCGTGTTCCTGCTCAAGAGCGGCACGTCCATCCCGCTGCACGACCACC
CGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAGCTGCATGGACAAGCTAGACGCGGGCG
GCGGGCAACGGCCGCGGGCCTTGCCGCCGAGCAGCAGTTCGAGCCGCGCTGCAGCCCCGGGAGCGAGAAGCCG
TGCGGCGGGCGTGTGCGTTCGCGGGCCGAGTACACCGAGGCCAGCGGCCCTGCATCCTCACACCGCACCGGG
ACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCTGGACATCCTGGCCCCGCCCTACGACCCGG
ACGATGGCCGGGACTGCCACTATTACCGGGTGTGAGCCGGTCAAGGCCAAGGAGGCCTCCAGCTCGGCCTGTG
ACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCACAGGCCGATGACTTCTGGTGCAGGGGAGAACCTATCCAG
GTCCCAAGGTCTTCCCTTGAAGCCACTGGCGCCAGGAGCGGTGGGCCGAAGACGTGCCCTACCCTACCACAAGG
GCTGTGTCTTACCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCAGCAGCCGCTTCCTCGGCAGCCTTGGG
AAGCACGGGCGACTGGACAGCAGCCGCCGGGCGGTTATGGGGCGGGGTGGGCGGGGAGGCTAGATTGTTTCC
TGGTACTGTCACTGCCACTGGGGCTTTGATTGGAGGAATGGGGCAGGGGACTATCTGAAGCGCTTCCATCCTAA
AGCCATAATGAAAATATCTTCTCTCTTCCCATCTATACAAATACTAAGTGGTTTTCTTGCTCCCACTCCCT
ACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTTTTTTCTTATAGTTTTTTAACTTATTG
ACTGTGCATGACCCAGTGGTTTGAATTGTTTTAGTTCAGTCATTGGTAAAACTAGGTTTAAAGGAGATGAGCT
ACTGTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTGTGAAAACTAAATGATTTTTTTCAGTTTGGGGATCATT
CTCACAACATAACTATGCATGTAGAGGACAAGATTTATTTTCTTTCTCCCTTGCCAGTAGCCACATCTGGTT
TACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGACATGGTCACTTAGAGCTTATCTTCCC
TATGAATCTCCAGATCTGTGAGTCGAGCAGATTTTATGTTGAGATTACCTTTAATGCAAAGACTGTATTATCC
TCACATGACTTTTTTCTTGTCTTACTGTACCTTAAAAGGTGATAGAGTAATCTGTATTTTTCTAACGGGAAGAT
TCAAAGGAGCTGAATGTGTTATGCTTCAAACAACCTGAATGTAAACACTCCTAGCCAGTTGTTGCATTCCCTAT
ATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAATATTATGTTGATAGTTGTTTCATATTCTCTCAG
GAACTTTAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGTGTGCTCAACCCTCTCCCTAAAATG
ACTGAGCCCTGGGTTCACTAATGTGGTTTTCTTAGGAAGAGATAGAAGGCACAGAAGATCACAGCTAGAGAAT
TGAGAATTAACATACTACTAGCCATTTTAGGGCACAAAACCTGGGATTAAACACTTCCTACTTCCCACTCCCA
ACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCTTTTAATAGTCCGAGCAGTCTTACCTT
GTTTACACATGTATTGACACCATTTGCTTCAGGCCATGGAGCACTGTTTCTCCCTTTTTACTATTTATAGGATTC
CGTTTTTTCACAAGACTTTTAAATAAAAAGAAATTGTAGAAATAAACACATTAAAATTTGCCAGCTGTCGTCTAA
GCCCTCTTGATTGACTTGCCCAAGTGGCAATAGAGTTCTAATATCTATAATAAAGGGAGATTGCTATTATTAGT
GGAATGTTGACCCCGTATGTAGAGAAACAGTACGTGCCTTTGCCTCTTATGCACACAGAGACCCAGGGTGAGGG
AGTATTTGTTCCCGATTTTTAAGATAGTATAAAAAAGCAAATACTTGGTGAGTGATTTAAAAATAAAACCAAAC
AAAAACAAAAAGATATTCCACAGGACATGCCACTTTATTATAAAACCTGACACAGGCATAGTACCAAGTATTTT
CTGCATTGTTGCTAAAAATGTTTTATTGTAGCTCCACATTCTGGTGTAGTTTAAATGCCTTTGGGGGCGAGTTTG
AAGCAGTTCTTCATGCCACTTAGTTTGAATAAAATTTCTAGATATGCAAATGATTTTCTTAGAAAACCTTCACAA
AATAAAAGATCTTGTTTTTTTTTCCATAGCACAGTAATGAATGTGGTTATCAATCACATACTTTTTTGGATTATA
TTGTAGCAAAAAGTTGATTAGCTTACCAAGATTATTAATAGCAATGTATGTGTTATAATACAACCTTAGTACATTA
AAGCTACGAAAACCTCATCCTGGCTGTAGGATAGTAATAAAGGAAGAATTATGACTTCATTATGAAAAAAGAAGT
TTTAAAGTTTTCAATTACGAGCAATTTGGAAGAAAAACCTAAGGTGCTTTTCAAAAAGAGTAACCTGAAATTGTTG
CAGGCCAAAACAGCAATATGATATCTCAGATTTAGTTCAATAAGAACAGTGAAACTTTTGGTTCATAATAAATT
CTGAGTAAATTAGTGGTGAAGACAAAATATAACTTGTTTTAGTGAGCCACTGAGGAAAGAATATGCTTATTACAA
AGACAAAATGTGGTGCAGAACTATCTTGCACCTGTGTGCATAAACTGTTAGTCGTGACTGACTTGGTGTGTTGC

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FIGURE 819B

TATTGTGTTTCTATATACTCCGTCCAATATAGATAATGTTTTAATAACAACGTGTTGGGATAAAAGTTATCTTCCCC
TTGGAAAGACTAATGAGCACAAATGATATTAATCACTTTTATGGTGAATAATAAATGCAATAATTGCCTCATGGGT
GAGAAATTGTCTGTCC

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FIGURE 820

MPRDNMASLIQRIARQACLTRGSGGGRGASDRDAASGAEAPMQPGFPENLSKLKSLLTQLRAEDLNIAPRKATL
QPLPPNLPPVTYMHYETDGFSLGVFLLKSGTSLPLHDHFGMHGMLKVLYGTVRISCMDKLDAGGGQRPRALPPE
QQFEPPLQPREREAVRPGVLRRAEYTEASGPCILTPHRDNLHQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRV
LEPVRPKEASSACDLPREVWLLETQADDFWCEGEPYPGPKVFP

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FIGURE 821

GGGGGAGAGGGGGCTCAAGGCGAGCGCGCCGGGCAGTTGCGGGCGCGTGGCTGCTGAGGTTGGCGGGCGGTGCCGC
GCGCCCGACGGGCCGGTGGTTGCGGGGCCCTCCCGCCTCGACCCGGGCTGGGGGCAGCCGTGGCGGCCGCCGGGGA
CCGCAAGGGGCGGAGGAAAGGAGGGGGCCGGTCCCGGCACGCAGAGGAGCAGCCGACCATGCCCGAGACAACAT
GGCCTCCTTGATCCAACGGATCGCCGCCAGGCTTGCTCACCTTCCGGGGCAGCTGGGGCGGCCGCCGCGCTTC
CGATCGCGACGCGGCTTCTGGCGCGGAGGCGCCGATCAGCCGGGCTTCCCCGAGAACCTGAGCAAGCTGAAGAG
CCTCCTGACCCAGCTCCGCGCCGAGGACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGCTGCCGCCCAA
CCTGCCGCCAGTCACCTACATGCACATCTACGAGACGGACGGCTTCAGCCTGGGCGTGTTCCTGCTCAAGAGCGG
CACGTCCATCCCGCTGCACGACCACCGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAG
CTGCATGGACAAGCTAGACGCGGGCGGGCGGGCAACGGCCGCGGGCCTTGCCGCCCGAGCAGCAGTTCGAGCCGCC
GCTGCAGCCCCGGGAGCGAGAAGCCGTGCGGGCGGGCGTGTGCGTTGCGGGCCGAGTACACCGAGGCCAGCGG
CCCCTGCATCCTCACACCGCACCGGGACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCTGGA
CATCCTGGCCCCGCCCTACGACCCGGACGATGGCCGGGACTGCCACTATTACCGGGTGTGGAGCCGGTCAGGCC
CAAGGAGGCCCTCCAGCTCGGCCTGTGACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCACAGGCCGATGACTT
CTGGTGCGAGGGAGAACCCTATCCAGGTCCCAAGGTCTTCCCTTGAAGCCACTGGCGCCCAGGAGCGGTGGGCCG
AAGACGTGCCCTACCCTACCACAAGGGCTGTGTCTCTACCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCA
GCAGCCGCTTCCTCGGCAGCCTTGGAAGCACGGGCGACTGGACAGCAGCCGCCGGGCACGGTTATGGGGCGGG
GTGGGCGGGGAGGCTAGATTGTTTCTGGTACTGTCACTGCCACTGGGGCTTTGATTGGAGGAATGGGGCAGGG
GACTATCTGAAGCGCTTCCATCCTAAAGCCATAATGAAAATATCTTCTCTCTCCCATCTATACAAAATACT
AAGTGGTTTTCTTGCTCCCACTCCCTACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTT
TTTTCTTATAGTTTTTTAACTTATTGACTGTGCATGACCCAGTGGTTTGAATTGTTTTTAGTTCAAGTCATTGGT
AAAACTAGGTTTAAGGAGATGAGCTACTGTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTTGTGAAAATAA
ATGATTTTTTCAGTTTGGGGATCATTCTCACAACATAACTATGCATGTAGAGGACAAGATTTATTTTCTTTCCTC
CCTTTGCCCAGTAGCCACATCTGGTTTACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGA
CATGGTCACTTAGAGCTTATCTTCCCTATGAATCTCCAGATCTGTGAGTCGAGCAGATTCATGTTGCAGATTCA
CCTTTAATGCAAAGACTGTATTATCCTCACATGACTTTTTTTCTTGTCTTACTGTACCTTAAAGGTGATAGAGT
AATTCTGTATTTTCTAACGGGAAGATTCAAAGGAGCTGAATGTGTTATGCTTCCAAACAACCTGAATGTAAACAC
TCCTAGCCAGTTGTTGCATTCCCTATATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAATATTATG
TTGATAGTTGTTTCATATTCTCTCAGGAACTTTAAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGT
GTTGTCTCAACCCCTCTCCCTAAAATGACTGAGCCCTGGGTTTCATCTAATGTGGTTTTCTTAGGAAGAGATAGAA
GGCACAGAAGATCACAGCTAGAGAATTGAGAATTAATACTACTAGCCATTTTAGGGCACAAAACCTTGGGAT
TAAACACTTCCTACTTCCCACTCCCAACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCT
TTTAATAGTCCGAGCAGTCTTACCTTGTTTACACATGTATTGACACCATTTGCTTCAGGCCATGGAGCACTGTTT
CTCCCTTTTTTACTATTTATAGGATTCCGTTTTTTTCAAGACTTTTTAATAAAAAGAAATTGTAGAAATAAACAC
ATTAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 822

MQPGFPENLSKLKSLTQLRAEDLNIAPRKATLQPLPPNLPVITYMHIYETDGFSLGVFLKSGTSIPLHDHFGM
HGMLKVLYGTVRISCMDKLDAGGGQRPRALPPEQQFEFPLQPREEREAVRPGVLRRAEYTEASGPCILTPHRDNL
HQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRVLEPVRPKEASSSACDLPREVWLETPQADDFWCEGEPYPGPK
VFP

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FIGURE 823

ATGCCCCTAGGTCTCCTGTGGCTGGGCCTAGCCCTGTTGGGGGCTCTGCATGCCCAGGCCCCAGGACTCCACCTCA
GACCTGATCCCAGCCCCACCTCTGAGCAAGGTCCCTCTGCAGCAGAACTTCCAGGACAACCAATTCCAGGGGAAG
TGGTATGTGGTAGGCCTGGCAGGGGAATGCAATTCTCAGAGAAGACAAAGACCCGCAAAAAGATGTATGCCACCATC
TATGAGCTGAAAGAAGACAAGAGCTACAATGTCACCTCCGTCCTGTTTAGGAAAAAGAAGTGTGACTACTGGATC
AGGACTTTTGTTCAGGTTGCCAGCCCCGGCGAGTTCACGCTGGGCAACATTAAGAGTTACCTTGGATTAACGAGT
TACCTCGTCCGAGTGGTGAGCACCAACTACAACCAGCATGCTATGGTGTTCTTCAAGAAAGTTTCTCAAAACAGG
GAGTACTTCAAGATCACCTCTACGGGAGAACCAAGGAGCTGACTTCGGAATAAAGGAGAACTTCATCCGCTTC
TCCAATATCTGGGCCTCCCTGAAAACCACATCGTCTTCCCTGTCCCAATCGACCAGTGTATCGACGGCTTGA

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FIGURE 824

MPLGLLWLGLALLGALHAQAQDSTSDLIPAPPLSKVFLQQNFQDNQFQGWYVVGLAGNAILREDKDPQKMYATI
YELKEDKSYNVTSVLFRKKKCDYWIRTFVPGCQPGFTLGNIKSYPLTSYLVRVVSTNYNQHAMVFFKKVSQNR
EYFKITLYGRKELTSELKENFIRFSKYLGLPENHIVFPVPIDQCIDG

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FIGURE 825

CACCGTCCGCAGCCCGAGCGCCCCGGAGCCGCAGGCGCCGCCGCGCAGAGACGCCGCGGCTGCGACTAGGCGCGC
CCAGCCGCACGTGGCGGACCCGCCCCAGGCCCCGAGTGTCTTGACCCCGCAGGCCTCCGCTCTCCTGTCTCG
GCCCCGTCCCAGGGCCGCGATGAGCTTCTGAGCCGACAGCAGCCGCCGCCACCCCGCCGCGCCGGGGCGGCCCT
GCACCTTGCGGCAGAAGCTGATCTTCTCGCCCTGCAGCGACTGTGAGGAGGAGGAAGAAGAGGAGGAGGAGGAGG
GCAGCGGCCACAGCACCGGGGAGGACTCGGCCTTTCAAGAGCCCGACTCGCCGCTGCCGCCGAGCGGAGCCCCA
CGGAGCCCGGGCCCGAGCGCCGCCGCTCGCCCGGGCCGGCCCCCGGCAGCCCGGCGAGCTGGAGGAGGACCTGT
TGCTGCCCGGCGCCTGCCCGGGCGCGGACGAGGCGGGCGGTGGGGCGGAGGGCGACTCGTGGGAGGAGGAGGGCT
TCGGCTCCTCGTCGCCGGTCAAGTCGCCGGCGGGCCCCCTACTTCCCTGGGTAGCTCTTTCTCGCCGGTGCCTGCG
GCGGCCCAGGAGATGCGTCGCCCGGGGTTGCGGGGCGCGCCGGGCGGGCGAAGGCCGCCGCTCGCCGCGGGCCG
ACCACCCGGGCACCCCGCCACACAAGACCTTCCGCAAGCTGCGACTCTTCGACACCCCGCACACGCCCAAGAGTT
TGCTCTCCAAAGCTCGGGGAATTGATTCCAGCTCTGTTAAACTCCGGGGTAGTTCTCTCTTCATGGATACAGAAA
AATCAGGAAAAAGGGAATTTGATGTGCGACAGACTCCTCAAGTGAATATTAATCCTTTTACTCCGATTCTTTGT
TGCTTCATTCTCAGGACAGTGTCTGTCGTAGAAAGAGAACGTATTGGAATGATTCTGTGGTGAAGACATGGAAG
CCAGTGATTATGAGCTTGAAGATGAAACAAGACCTGCTAAGAGAATTACAATTACTGAAAGCAATATGAAGTCCC
GGTATACAACAGAATTTTCATGAGCTAGAGAAAATCGGCTCTGGAGAATTTGGTTCTGTATTTAAGTGTGTGAAGA
GGCTGGATGGATGCATTTATGCCATTAAGCGATCAAAAAGCCATTGGCGGGCTCTGTTGATGAGCAGAACGCTT
TGAGAGAAGTATATGCTCATGTCAGTGTCTGGACAGCATTCTCATGTAGTTTCGATATTTCTCTGCGTGGGCGAGA
ATGATCATATGCTTATACAGAATGAATATTGTAATGGTGGAAAGTTTAGCTGATGCTATAAGTGAAAACCTACAGAA
TCATGAGTTACTTTAAAGAAGCAGAGTTGAAGGATCTCCTTTTGCAAGTTGGCCGAGGCTTGAGGTATATTCATT
CAATGTCTTTGGTTCACATGGATATAAAACCTAGTAATATTTTCATATCTCGAACCTCAATCCCAAATGCTGCCT
CTGAAGAAGGAGACGAAGATGATTGGGCATCCAACAAAGTTATGTTTTAAATAGGTGATCTTGGGCATGTAACAA
GGATCTCCAGTCCACAAGTTGAGGAGGGCGATAGTCGTTTTCTTGCAAAATGAAGTTTTACAGGAGAATTATACCC
ATCTACCAAAAGCAGATATTTTTGCGCTTGCCCTCACAGTGGTATGTGCTGCTGGTGTGAACCTCTTCCGAGAA
ATGGAGATCAATGGCATGAAATCAGACAGGGTAGATTACCTCGGATACCACAAGTGCTTTCCCAAGAATTTACAG
AGTTGCTAAAAGTTATGATTCATCCAGATCCAGAGAGAAGACCTTCAGCAATGGCACTGGTAAAGCATTACAGTAT
TGCTGTCCGCTTCTAGAAAGAGTGCAGAACAATTACGAATAGAATTGAATGCCGAAAAGTTCAAAAATTCATTT
TACAAAAGAACTCAAGAAAGCACAGATGGCAAAAGCTGCAGCTGAGGAAAAGCACTCTTCACTGACCGGATGG
CCACTAGGTCCACCACCCAGAGTAATAGAACATCTCGACTTATTGGAAAAGAAATGAACCGCTCTGTGAGCCTTA
CTATATACTGAGCTACTCCTTTCCACCTCCCCCTGAACACTGTGACAAGAGGAAGCTAGGTTGAAATCACTGAT
AGAATCCAGTTTGCAATTACTTTCTCGATTGGTGTGAGTAGTTTTACTGATTAGGACTTTTATTGTGAATTACAG
TTGAAAGCTGTATTTTGATGATTGCTATGTGAGGCTTTTCATCTAATCTTACCAGTCTGTCTTCTGTAGGATGTGT
CACTGTTGGATGTTACACCAGCCTTTCCAGGGTTAACCCTGTGGTGGTGTGCTGCTTATAGTTTGTGTTGCAT
TGTAATAAAAGGTGTCTTTCCCTGTAGTGACCTGTAAAAGTACTCAAGGGCTTTATTACAGACATACCCTCCCT
TTGAAAAGGGACATGCTAAAAGACTCATTACTACTCAGCCTTCAATGTACCTGTGTGTCATCTTATATTTCTTT
TTTTTTTTAATTGTGAATTAGACTTGTATATCCCACTGGGAGCACTTTGTAGGCATTGCATGAACCATGGGATGAT
GATTCTGTGGAGGATTGCCTTGTGAATTTGCTGCTATTTTAGTTTTGCTTTTGTGTAAGTTGTAGCATTAAA
CAATCATTTGTTGTTAATAGGTCTTCTTTTTGAAACAATTATGTGAATGTATAGCTGCTTTTGATGGAAAGCAGC
TATTTGCCCTTTTTTTTTTTTCTTTGAACTTTGAAGCTAGTGCATTGGAAAAATGCACCCCTTTCCCTCCTTTGGAA
TGCTGTATTAATGTAGTATAATAATTACTGGTTTTGTAACCTGTTCTGGTAATGTCCTTCCCGGACTCTTTTTAA
ATGTCTCCCCCTAAGTTTTTATACTTGATTGTATTATTAGTCTGTTTTTAAATGTTTTGCCCGGTTTTTCTCTTCA
ATATTTGTGTATATAAACCGATCTTCGTGATACTGTACATAGCTGTTTGAAATGCCAGAATGACTTCTGACATTC
CAAGTTTTTACAAAATATATTTTATCTGTGATTAGCCATTTGACTAATAATACTGGCTAACAGATGTTGAAAA
AATTGTCTGTTTTCTCATTAATTTTGGTCTAAAACATGTTTGCACCTGTCTTTGACTTGTGTTTTATTAAACATTG
ATTGGCATATTAAAAGTCACTCTGAGCTT

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FIGURE 826

MSFLSRQQPPPPRRAGAACTLRQKLIFSPCSDCEEEEEEEEEEGSGHSTGEDSAFQEPDSPLPPERSPTTEPGPER
RRSPGPAPGSPGELEEDLLLPACPGADEAGGGAEGDSWEEEGFGSSSPVKSPAAPYFLGSSFSVVRGCGPGDAS
PRGCGARRAGEGRRSPRPDHPGTPPHKTFRKLRLFDTPHTPKSLLSKARGIDSSSVKLRGSSLFMDTEKSGKREF
DVRQTPQVNINPFTPDSLLHSSGQCRRRKRKYWNDS CGEDMEASDYELEDETRPAKRITITESNMKSRYTTEFH
ELEKIGSGEFGSVFKCVKRLDGCYAIKRSKKPLAGSVDEQNALREVIYAHAVLGQHSVVRYSAWAEDDHMLIQ
NEYCNGGSLADAI SENYRIMSYFKEAELKDLLLQVGRGLRYIHMSLVHMDIKPSNIFISRTSIPNAASEEGDED
DWASNKVMFKIGDLGHVTRISSPQVEEGDSRFLANEVLQENYTHLPKADIFALALTVVCAAGAEPLPRNGDQWHE
IRQGRLPRI PQVLSQEFTELLKVMIHDPERRPSAMALVKHSVLLSASRKSAEQLRIELNAEKFKNSLLQKELKK
AQMAKAAAEERALFTDRMATRSTTQSNRTSRLIGKKMNRSVSLTIY

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FIGURE 827A

TTGCTGCGTCAACTGTGTTCCCTTTGGCCTGGCTGAGTTTGATACTGTGGGGATTTCAGTTTAGGCGCTGGCCCCGA
GGATATCCCAGCGGTGGTACTTCGGAGACACCTGTCTGCATCTGACTGAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCCACCTGCAGTAGCGTTTCGCCCCGAACATGGCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTCTATTACCCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCGGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCC
TGCAGCCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCACAATCAGATGGTGGTGCAGTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGCCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAATAATTCAAGAAAATTTTCAGACAAGTTAAACTTTGGCTTGGGAAATAGGA
GTGAAGCTGTTATCGCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTCGGGCAGCTGATCTCC
TCCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCCAACCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTGAGGAACATGTCAAGTCCCTTTCTTGGGGAATTGATCCCTATGACA
AACCATAACCATCTACATTGAACGACACGAACCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCCA
TGAGAGCAGCCAGTTTGTCAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTCAGCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCAGGAGGGGCCGCGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTGTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCAGGGCTGTTCCTTCATCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAGAATGCCCATCCTGTCCAAGGAGTCGGCTCCAGGCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACCTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCAGGGCATGGAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTTCATCTTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTACCATCTTTGGCTCGAACAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTCAC
CATCTGATGAGCGGGGAATGAGTGTGTTGCTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCACAT
GCTTCAATGGAGAGGACTTTGACAGGCCGGTGGTGTGTCCTGCTGCACTGCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTCAAGATGAGTGAAGATTTGTGATTAGAGGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCCCTCCTGTGCCTTGCCCTGTGGGTTCTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGCGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCTCTCA
CCGGGCTACGGGCAGCAGTGGCCCTGGACTTTGACTATGAGCACAACCTGTTTGTATTGGTCCGACCTGGCCTTGG
ACGTCATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCTCTGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCTATCACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTTCAGTGGCCAGCAGCGCTCTGTCAATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTTCACAGCTCAGCATATTCC
GAGCTTCCAAATACAGTGGGTCCAGATGGAGATTCTGGCAAACAGCTCACGGGGCTCATGGACATGAAGATTT
TCTACAAGGGGAAGAACTGGAAGCAATGCCTGTGTGCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGAACACAGTATCGCT
GCAGCAACGGGAACGTATCAACAGCATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGTATCCCACTGT

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FIGURE 827B

CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA
GTGACGAGTACAACCTGCAGTTCGGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCAACCTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACCTCCAGTGCCGAAACGGGC
ACTGCATCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCAAACGGCACTTGCATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGCAGGATGCTCCCAAGATCCTGAGTTCACAAAGGTATGTGATGAGTTCGGTTTCCAGTGTGAGAATG
GAGTGTGCATCAGTTTGATTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCAACCTGCG
AAAACCCACAGAAGCCCCAACTGCTCCCGCTACTTCCAGTTTTCGGTGTGAGAATGGCCACTGCATCCCCAACA
GATGGAATGTGACAGGGAGAACGACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTCACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCCCTTGCTTGCAAACGTCA
CTGCTGCCTCCACTCCCACCAACTTGGGCGATGTGACCGATTGAGTTTGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGATGAGCAGGGAGTTCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCTGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAAATGCCCTCTGCAT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAGTCTTGAAACCAGATACCACGTATCAGGTTAAAGTACAGGTTTCAAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCTGAGGACCCAGAGGGATTGCCAGATGCCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCAGAGGGCTGCTAGTAACCTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAGGAAAAGTGATCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTCACCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTGACACCCACAAGCAAGAGAGGAGAACCTTTGAACTTCCGAGGAAGCATATTGTACACAAAGTTGGCAATC
TGACAGCTCATACTCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTTGAGC
ATGTTATGACCAGAGGGGTTGCGCCACCTGCACCTAGCCTCAAGGCCAAAGCCATCAACCAGACTGCAGTGGAA
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCATTGTGAGTAAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGCAGGCTTCCAC
CCCGTCACCTGCATGTGGTTCATACGGGCAAAACCTCCGTGGTCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAAAATCCC
GTAACAGCACTGTGGAATACACCCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACCTGGGGA
ACATGAGCAAAGATTCCAGCATAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAAATGAAAGCAGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAATTT
CCAACCTGAAGATGGGTCTATAATTACACGTTTACCGTCCAAGCAAGATGCCTTTTTTGGCAACCAGATCTGTGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGGCCATCTTATTCTGATACTGCTGAGCCTGGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCTATGATAACTGGATTTTTCAGATGACGTCC
CCATGGTGATAGCTGAAAGAGCTTTTCTCACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAGATAGTT
GATGGTTTATTTTAAAGATGCACCTTGAGTTGCAATATGTTATTTTATATGGGCCAAAAACNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNGGAATGAATAAACTTTGTAGTAATCAACTGTGAACCTCAAACCAGGTTGATTTTA
GTAACCAATTGCTTTGATTTGACATTAATGTAGTCTTACAGGCTGTGCTTGTGCTGGGCATGCTTTTACGTCTGT
GAGATAATTTTCGGTTCAGTAAATTGGCCAATCTTTTATTTTCTAAGACACAGAAATGTATTTAATAAAACCT

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FIGURE 827C

CGAGAGAGTGATGGGTGGAACCCCTTCTCCTTGAAAGTGTGTACAGATATTCCATTTTGTGGATATAGTTTAT
AGGAAAGTGTGTGGATGTATTATGGCGGAAGGTTTCTTTATGTTATTTTGTAAATTTATTGGGACTCTGTGTAAG
GCCAGGCTTTAGTGGTCATTAGACACCACATGTGTTATGAGCCCCCTTACCCATAGGGTTGGGGGTGGGAAGAGAA
GCATATTTTTTTGCCATTCCGGAAGCAATCCATTTTTATTCACTTGTGTGTATGTAATGGTCTTTGGCAGGAGA
GAGCACTGAGTCATTGCTGGAGTTCAGTTCAACAGAGCTGCAGCTTGGGAAGCCCTGTAAGCCACAGCTTCCTC
TCTTATATTAATTGATGGAATTTTACTGTATGTGCCTCTGTACAAGATGTAGCTTTGAGAGCTACAAAATGATAA
CACTGCTTTATTACACACTGGTTTCATTGTCACTTGCAAAAACCTTACCCTGGTTGTGGGGGAGAGTTCTAGATCTG
TGCCATGATCCATACACTGGCTAATAGAGTACATAATTTTTCCATTTTCCATTTTTTGTGTTTTACTTACTACTGA
AGGATCTCAGATGTAAAATTATGTATTTGGTTTTGAGATGGCCACTTATTGTCCTTAAAAATCCATACTGATATAT
GCAGTCATTTTGAATTGGACAGTGCCTTCTCTTTTTTTTTCTCCTCTTCTTCCATCTCCCTCACCCATGCCCCCA
CCCAATCTAAAGAGACAGTGTGTACATTCTCATAGAGATAGAGAAGATCTAAAAAGTTGAGACTACTCAATCCA
GTTAACACAGCAGGAGCACTAGAGTTTGTTCATTTATTTCTCTGTAAAACAAGCTGTGCTTTTTTTCTTCTGC
CTTTAAAAATGCCACCCGTGTATTCAAACCATGGCCACTTGATACTTATGTAGAATCCATCGTGGGCTGATGCAAG
CCCTTTATTTAGGCTTAGTGTTGTGGGCACCAATGTGCGAGCATCGTTGTGACTTGTGCTGTATGATTCTCACTGA
AGAATTTCCCTTTCAGCCAAGAAGCAGTGAGGTCTGGGAATATTCCAAAGTCATGTCTCTGAATATGTGTCTTGA
CGTGCAAGCTTTGTAAAACCCCATCCCCGCTTAGGTGCGAGGCATCACCTTCTCACAAGTGTTTAGTTTCTTTTA
ACCACAAGTATCATTCTTGGGTGATAATATAGTTTCATTCTACTTAGGGATTGTTTAGAAAACAAAGAAAGAGCC
AATTAAATTTTTTAGTTTTTGAATTTTTATTTATATGTATACTTAGATGAGTATTTTAAAGCTGTGACCTTTAG
TTTGCCATACGGGTAGGACTGTATTTTCATGTTAACAACTGGTGGTAATGATAAGCCTTCTTCTAGCGTATTTTCT
CTTCTTCTCCTGTCACTTTCCTAAGTTTTTTTTTTTTAAAGACTGGAATTTTTTTTTGGCTTTATCTTGTCTTACCGT
AGAGATTTGTTCAAACTCTAAGCCCTACCACCTCCCCTTTAATAAGCTCTTTAAATAGTTGAATCATTAAACAAC
CTGGTGGGAGGCAAGTCATTTAATTGAACCACTAGGAAGTGATTTTTCTTTTCTTTTCTGCCAACTTTTTGGTG
GCATTTGTAAAAGCTGATATAAAAGGCTCTGAGATGTTATTTTCAGTTATTCCATAGGCAAGCCTTTTTACAGAG
CATATGCTCCAGTTGGCAGCTTGAGATATTTCCGAGCATCCGGTTCCTAGCTACCAGTGCCTCCCAATGCTTAGT
GCACAGTACTGTAGACTGGCCATCACCCCTCTCCTTGGAAAAATGCCACTGTGCTGTTTGAAAAAAGCAGCCTTT
TAGGGCTAGAGTATTTTATATAAACAGAAGAGCTAAGTTCTCTGAAGACTAAGCTAGATAGCTGCAGCTATATGTA
AATTGTATATTTTTATGAACTTTTGAAGCACACACTCCTGTTTCCCTCTGTGTAGCTTTGTGGGGATTTTCATGTA
TATATGCTGTCTGAAAGAATCCAGAGGTTGGAGTGCCAAATAGAAAATGAAAACAAATGCCTTGTACTACAGGCAG
CCTCTGAAGGTGACCACATAACTGTCTTCACTGTGACCAATCGGAGTCCCTGCTTGCTTGTGAAGAAGGGGCTTT
TGTAACCTTGTGGAGATGCCACCTCAGAAGTTCACACTGTGCAGGAAAAAGGTTTTATTCTCTCCTGGCATACAT
TAGAATGTCAGATGCCTGCATCCATGTGGACCACGATGGGCCCTCTAAAAATTGGTGGGCAGGGGGTTTGCTTATG
AGTTTTCTCTGGAAACCGATTTTACTCCTGGATGTATTGAATGCCCTTGAGCTTTATGAGATACGAGTCCACAT
GGATAAAATGTTAGAGAGTGGAGTTCTACAGAGGATTCCAGGAAGAGGCCATGTCTGTGCAGTCCCTAGTTCCAGA
CAGGTGAGAAGCTCCAGGAACCTACTGGCTACCTTGACAAGCTGGGTAAATAGTTATCATTCTGGGTAACCTGGTTG
AAACTCTGACTTTTGGACAAGTAATTCCTGGGGTCTGTCTTTGGTAGCATCACCAGGGATATTTGGGTGGGACA
GACAGAAGACACACAGCTGCCTGTTCTCTCCTGCCCATCATGTTTGGCCCACTAGATGAAGCTGTACTCAGCAAT
TTAGGGAATGTAACCTTCTCAGAAGTGGCCATTTTCAGGGGAAGCTTGGGAGAGCAATAGTATGGTGAGCCCT
TAGAGATGAGCGCCTACTCCTTCTTGGCGAATGCTGCCTTCAGATGCTTACCAAGTGGTCACTGCATCTAGTAAG
ATTATATTTCCAGTACACTTCTTAGGGCAGAAACACCATCCTATCAGGTTTGGTCACTCCCTTCTTATGAAGG
GAGTCATGGGGAATTCCTGAAAATTTTCTTCTTCTGCAGACAGTTGGATGAGTCCCTTAGAGAAGGCATCCAGA
GACATAACTAACTGAATATCATCCATATTGATTTTAGGAATTGACTCTAAACTCTGTGCAGAATCTTGTGTT
GGGATTGTATCTTGACATTCTGTTGTGTTATTTTTCTTAACTGGAGTGTGTGCTGCCTTTAGGTACAATTTTT
GTGTAATAAAAGCCAGTGCATTAAGTTTATATAGACTACTTTCTATGCAAGACTGAGATATGGAATAGATAGGAA
GAGATATGTAAGTGTGGGTACATGGACAGTAAGTGTGTTTTAGATGGAGTACCAGCACCGAAAATGGGTTGAGG
GAGGATGGGTGTATGTATGTTTCTGCCCACTAATTTTGAGCAGCCATATTATGAATTAATCGTCACAGCCAAG
TAATAACCCAAGAATGGTATGAGTTTCATGTGTAATAGCTCAAATGGAATAAGCATGAATGCTGGAGTGGACCAT
TATCCTCAAATATTCTATGTCACTTCTCATTTAAAGACTCTTGTATGAATATTAGAACTTTAGGCAAAATCA
AAAGTATTTGCGGCAAAATAAAGGCCTATTCTACTCTTATTTAAAGTGAAACACTGTATACTTGTCTCTCCAA

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FIGURE 827D

AGCGAAATTAAGTATTTATAATTTCAATTGCCTCGATAAGTTTCCAAGTCACTGAAATCTGCTGAAGGTTTTACT
GTATTGTTGCACAACTTTAAGATAATTTTGTCTCAATGTCAACTTTTTTCACTGAATAAAAATTTAACTGGGTC
AAGAAAACACCTCTTTGAAATCCACTGTCTCTGTGTGTCTCGAGCTGTTCTTTAGAGCGCAATAAAGATGGCTG
ACGCAGTCTCCAAACCCC

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FIGURE 828

AASVTFPLAWLSLILWGFSLGAGPRISQRWYFGDTCLHLTEPALLASRCTFSPGGGATCSSVRPNMATRSSRRES
RLPFLFTLVALLP GALCEVWTQRLHGGSAFLPQDRGFLVVQGDPRELRLWARGDARGASRADEKPLRRKRSAAAL
QPEPIKVYGGVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARP KSSDVVVS YDYGKSFKKISDKLNFG LGNRS
EAVIAQFYHSPADNKRYIFADAYAQYLWITFD FCNTLQGF SIPFRAADLLLH SKASNLLLGFDRSHPNKQLWKSD
DFGQTWIMI QEHVKSF SWGIDPYDKPNTIYIERHEPSGYSTVFRSTDF FQSRENQEVILEEVRDFQLRDKYMFAT
KVVHLLGSEQQSSVQLWVSFGRKPMRAAQFVTRHP INEYYIADASEDQVFVCVSHSNNRNTNLYISEA EGLKFSLS
LENVLYYSPGGAGSDTLVRYFANEPFADFHRVEGLQGVYIATLINGS MNEENMRSVITFDKGGTWEFLQAPFTG
YGEKINCELSQGC SLHLAQRLS QLLNLQLRRMP ILSKESAPGLI IATGSVGKNLASKTNVYISSAGARWREALP
GPHYTWGDHGGIITAI AQGMETNELKYSTNEGETWKTF IFSEKPVFVYGLLTPGEKSTVFTIFGSKNENVHSW
LILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVVSNC SCTR EDECD
FGFKMSEDL SLEVCVPDPEFSGKSYSPVPVCPVGSTYRRTRGRYRKISGDTCSGGDVEARLEGE LVPCLAEENE F
ILYAVRKSIYRYDLASGATEQLPLTGLRAAVALDFDYEHNC LYWSD LALDVIQRLCLNGSTGQEV I INSGLETVE
ALAFEPLSQLLY WVDAGFKKIEVANPDGDFRLTI VNSSVLD RPRALVLPQEGVMFWTDWGD LKPGIYRSNMDGS
AAYHLVSEDEVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHYAI AVFKNEIYWD DWSQLSIFR
ASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSL LCLPKANN SRSCRPE DVSSSVLP SGDL MDCD
PQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDND CGDMSDERNCPTTICDLDTQFR CQESGTCIPLS
YKCDLEDDCGDN SDESHCEMHQCRSDEYNCS SGM CIRSSWVCDGDNDCRDWSDEANCTAIYHTCEASN FQCRNGH
CIPQRWACDGD TDCQDGSDED PVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLCTHFMDFVCKN
RQQCLFHSMVCDGIIQCRDGSDEDA AAFAGCSQDPEFHKV CDEFGFQCQNGVCISLIWKCDGMDDCGDYSDEANCE
NPTEAPNCSRYFQFRCENGHCIPNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYRCSSGTCVMDT
WVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRCDGHQDCQDGRDEANCP THS
TLTCMSREFQCE DGEACIVLSERC DGF LDCSDESDEKACSD ELTVYKVQNLQWTADFSGDVTLTWMRPKKMP SAS
CVYNVYYRVVGESIWKTLETHSNKTNTVLKVLKPDTTYQVKVQVQCLSKAHNTNDFVTLRTPEGLPDAPRNLQLS
LPREAEGVIVGHWAPP IHTHGLIREYIVEYSRSGSKM WASQRAASNFT EIKNLLVNTLYTVRVA AVTSRGIGNWS
DSKSITTIGKVIPPPDIHIDSYGENYLSF TLTMESDIKVNGYV VNLFWAFDTHKQERRTLNFRGSILSHKVGNL
TAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKA INQTAVECTWTGPRNVVYGIFYATSFLDLYRNP
KSLTTS LHNKTVIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVHTGKTSVVIKWESPYDSPD
QDLLYAI AVKDLIRKTDRSYKVKS RNSTVEYTLNKLEPGGKYHIIVQLGNMSKDSSIKITTVSLSAPDALKIITE
NDHVLLFWKSLALKEKHFNESRGYEIHMFD SAMNITAYLGNTTDNFFKISNLKMGHNYTFTVQARCLFGNQICGE
PAILLYDELGSGADASATQAARSTDVA AVVVPILFLILLSLGVGFAILYTKHRR LQSSFTAFANSHYSSRLGSAI
FSSGDDLGEDDEDAPMITGFSDDVPMVIA

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FIGURE 829

AGGCGCTGCGGAGACGCGTAGAGGAGCGCGCCCCCGGCCGMTGCCGMCCCTGGCCCCGTGCCGTACCCCCGCTTC
TCCGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCG
GTACCCGGGACCCCCAGCCCGGCCGCTCGCCCCGAGCCCGCCGGCCGCACACGTCCCCGGAGCCGGGCCTAGGGCG
GGCGGCAGGGCGGCTCGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCCATGGCCGCGGCCGGCTGGCGGGACGGC
TCCGGCCAGGAGAAGTACCGGCTCGTGGTGGTCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTC
ATCCAGTCCTATTTTGTAACGGATTATGATCCAACATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGAC
AGAGCAGCCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGG
ACTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTGAAGAAATCTATAAGTTTCAAAGA
CAGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAATTGGTAATAAAGCAGATCTGGATCATCAA
AGACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAG
ATTAGGATGAATGTAGATCAAGCTTTCATGAACCTTGTCGGGTTATCAGGAAATTTCAAGAGCAGGAATGTCTCT
CCTTCACCAGAACCAACACGGAAAGAAAAGACAAGAAAGGCTGCCATTGTGTCATTTTCTAGAATCCCTTCAGT
TTTAGCTACCAACGGCCAGGAAAAGCCCTCATCTTCTCTTCTCTCTCAGTTTACATCTTGTGGTACCTTTCT
AGCCTTAGACAAATGATCACCATGTTAGCCTTAGACGAAGAAGCTGGCTAGTCCTTCTGTGAAGCTAATAACAAT
GGTCATTTCCAGACAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCCTTTAAATATATGTC
TATATACACAGACATGCTCTTTTTTTAAGTGCTTACATTTTAATAGAGATGAATCAGTTTTGGAATCTAAGCTGT
TTGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTAACTTTTGAATCATACTGCCTACTGTTACTCTAAATA
GAAATATAGGGTTTTTTTTAATGTGAATTTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTTAACCTTAA
ATACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACCTTTTGTCTTCTGATGGC
CAAAATACCAAATGCCTGTTGTATTTATGGATTAAAAACTGCTTATAAAAACCTGTGTTACTACTCCTACTCTTG
GAGATGATAATATCTATGTGGTCAAATATTTGGACTCATTTAGGACTTAGATATTTTCAAGTGTACTTGATTTTTT
AATTTAACTCTTTTTCACAGCCACGCTAAGGGTAAAAAGGAATAATTTCTTCTGTCTTCTTTTCAAGTATTTT
TGGGTAAGGGATTCAAAAAACTAAAAGTGTGTTTGTGTAATATAAAATATGGAATTGATCTTTCCAGGGTCAG
AGATGATTAATGTTTTTGCTATATACTTTTATACATTATTTTCTTATCAAAGTATTTTATATG
TTTGTAAGCAGATATGCTTTCATAGCATACCTTGTGTATATGTAAAGATAAGTATTTAATTCTCACTGTTCACTT
TTAACTGACAAAGAAAAACAAGTGGAACTACAGAACTGTGGTAGAAGCTTTTACTTGCTGGTCTGGTCTTGGTT
GTACCCATCTTTGGCCAGTCACATACTACTCAAGAAACCTTCCCAATAGAGTACAACAGGATGAGACTCTGAAA
TCACTTTCAGTATTCCTGCTAGATATTGATTGTTATTTCAAGTATTAAGTGTAAAGCTTTTAATGGATAATTAGT
ATAACTGTGGATGGCATCTGATTTTGTGTTTAACTTCTGTGGATTGTGTTAAGCAATTCAATAGTATGTTCTGTA
TTTTGAGATGCTAAGTGGTATTGCACAGTTGTCACCTTATCAAGTGTGTACAACAGTCCCATGAAGTTTATAGAG
CATACCTTGTATAGCTTCAGGTGCTAGAATTAAATTTGATCTGTATCACAAAAAAAAAAAAAAAAAAAAAGG
CTCTTTAATTAGGCG

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FIGURE 830

CGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCGGT
ACCCGGGACCCCCAGCCCGGCCGCTCGCCCGCAGCCCGCGGCCGCACACGTCCCCGGAGCCGGGCTAGGGCGGG
CGGCAGCGGCGGCTCGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCCATGCGCGCGGCCGCTGGCGGGACGGCT
CCGGCCAGGAGAAGTACCGGCTCGTGGTGGTTCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTCA
TCCAGTCCTATTTTGTACGGATTATGATCCAACCATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGACA
GAGCAGCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGGA
CTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTTGAAGAAATCTATAAGTTTCAAAGAC
AGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAAATTGGTAATAAAGCAGATCTGGATCATCAA
GACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAGA
TTAGGATGAATGTAGATCAAGCTTTCCATGAACCTGTCCGGGTTATCAGGAAAATTTCAAGAGCAGGAATGTCCTC
CTTCACCAGAACCAACACGGAAAGAAAAAGACAAGAAAGGCTGCCATTGTGTCAATTTTCTAGAATCCCTTCAGTT
TTAGCTACCAACGGCCAGGAAAAGCCCTCATCTTCTCTTTCTCTCCTCAGTTTACATCTTGTGGTACCTTTCTA
GCCTTAGACAAATGATCACCATGTTAGCCTTAGACCAAGAAGCTGGCTAGTCCTTTCTGTGAAGCTAATACAATG
GTCATTTCCAGACAAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCCTTTAAATATATGTCT
ATATACACAGACATGCTCTTTTTTTAAAGTGCTTACATTTTAAATAGAGATGAATCAGTTTGGAAATCTAAGCTGTT
TGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTTAACTTTTGGAAATCATACTGCCTACTGTTACTCTAAATAG
AAATATAGGGTTTTTTTTTAATGTGAATTTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTAAACCTTAAA
TACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACTTTTGTCTTCTGATGGCC
AAAATACCAAATGCCTGTTGTATTTATGGATTAAAAACTGCTTATAAAAAAAAAAAAAA

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FIGURE 831

MAAAGWRDGSQGEKYRLVVGGGGVGKSALTIQFIQSYFVTDYDPTIEDSYTKQCVIDDRAARLDILD
TAGQEEF
GAMREQYMRTGEGFLLVFSVTDGRGSFEEIYKFQRQILRVKDRDEFPMILIGNKADLDHQRQVTQEEGQQLARQLK
VTYMEASAKIRMNVDQAFHELVVRVIRKFQEQECPPSPEPTRKEKDKKGCHCVIF

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FIGURE 832

TTAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGGGAATTTTTAAAGGAAA
TGTTTTTCTTTTTTTTTTTTGTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCTTCTTAAGTGGAATATT
CTAATAAGCTACCTTTTGTAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTGCATTGATGTCTGACTGCCA
CTCCTTCTTTCAAGGACAGTGTTTTTTGTAGTAAAATCACTGGTTTATACAAAGCTTTATTTAGGGGGTAAAGT
TAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAAAAAGAAAGTTATTC
TTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAACATACTGATTGGTCTTA
AAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTCTACAAAAGTGGAAAAATGAACCTGGTTCT
AGAAGAATGTACACCAAATAAAAACATGTGAAGCAGTATTGATTCTTT

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FIGURE 833

LSTCFGYKAFLTFYKPTFKGNF

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FIGURE 834

GCACGAGCATAGACTTTTAAACTGGTACGGTTCTTAGAGAATGGTCCTTGGCCTTCTGTTGTTGTKGTTTTTT
TCTTTTTCTTCTTCTCCTTCTCCTTCTTCTTCTTCTCCTTCTTCTTCTTTTTTTTTCAGAGTCTTGCTCTG
TCACCAAGACTGGAGTGAAGTGATGTGATCTCGGCTTACTGCAACCTGGGAGGCAGAGGTTGCAGTGAGTCGAGA
TGGTGCCATTGCTCTCGTTTGGGCAACAAGAGTGAAACTCTTGTCTCAAAAAAAAAAAAAAAAAATGAGGTTTAAGA
CAGTTTTGTCTATTACTGGTGGGATCTGGTCACACAAGATAGCATTAAACGTGACATGGCACATAAAATTGGTTAA
AAAATTTTGTTTTTTAATTACGTAATGTAAAAGCCCAACAACACTTTATGCAAGATTGGAATGTATCTTCAAAAT
TCAGATTTAATAAACATGTAAAGATCCTCTGTATATAAAAGTTGTATTTAATCCCTTGTGCCCAAGAATGCCTAT
AAAAGATCCCAAGAAATGTATCTATGAAAAGATAGCAATAGGGAATGGTGAACAAATAATTTAATTTGCCAATTC
TAAAAACATGGACTTAAACCCCATGAAACTTGGTTCCATAGTTTTAACTGTTTTATGGTTCCAATACAAAACC
AGAGTGGTTTACATTCCACAATXACCAAATTTGCATCCAATXTTGGGGTAATTTTXXGGTATTTGCCATGGGATAC
TATTCATTTTT

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FIGURE 835

MVLGLLLLLXFFSFSSSPSPSSSLLLLSSFFFQSLALSPRLE

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FIGURE 836

TGTCGGGGACGGTAACCGGGACCCGTGCTCTGCTCCTGTCGCCTTCGCCTCCTGAATCCCTAGCCATATGCGTGA
GTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGCCTGGAACA
CGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCCTTCAACACCTTCTT
CAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACAGTCATTGATGAAGT
TCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGATGCTGCCAATAACTA
TGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCAAGCTGGCTGACCA
GTGCACCCGCTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTACCTCCCTGCT
CATGGAACGCCTGTGAGTTGATTATGGCAAGAAATCCAAGCTGGAGTTCTCCATTTACCCGGCACCCAGGTTTC
CACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGTGCCTTCAT
GGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTCGATATCGAGCGCCCAACCTACACTAACCTTAA
CCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTTGACCTGAC
AGAATTCCAGACCAACCTGGTCCCCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCTGTGCTCTCTGC
TGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGACATCACCAATGCTTGCTTTGAGCCAGCCAACCAGATGGT
GAAATGTGACCTGGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGGTTCCCAAAGATGT
CAATGCTGCCATTGCCACCATCAAAACCAAGCGCACGATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGT
TGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCAIGCT
GAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCCAAGCGTGC
CTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTTCAGAGGCCCGTGAAGATATGGCTGCCCT
TGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGAGAGGAATACTAAT
ATCCATTCTTTTGGCCCTGCAGCATGTCATGCTCCAGAATTTACGCTTACGCTTAAGTACAGATGTTAAAGC
TTTCTGGTTAGATTGTTTTCACTTGGTGATCATGTCTTTCCATGTGTACCTGTAATATTTTCCATCATATCTC
AAAGTAAAGTCATTAACATCA

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FIGURE 837

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMP SDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTRLOGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVADITNACFEPAN
QMVKCDPGHGKYMCCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAVHWYVGEGMEEGEFSEAREDMAALEKDYEYVGVD SVEGE EEEEEEE
Y

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FIGURE 838

GGGCTTCCTGGGGAGGGTGTGGCAGGGTGGTGGGCATCCCCCTCCCTCACCAAAGCATGGGCTCTTTGTTTCCTCT
TTGCCAGGCCTGGGTCCCTCCCAAGTGACCCCTCAGCCTTCACTTCCTCCTCACTCCCGGGGAGCTGTGACAGGTG
TTTGGGGGAGGGGAGGGGGGTATGATAAGCTGGGACAGCTGCACCCACCGGTGCTCTGGTGAGATGGGGGGCCCCG
GATGTTGGGGAGACACATCTGCTGGGTTCACAGCCCAAGGTCCCCAACCCTGGCTGTCTGGCCTTGTCTGTCACC
CCCCGTGCCCCTGGCAGGGACAGGAAGCTCCCCCCCCACCCCGCTTGGGCAGTTTGCCTTGGCACGGGCCTGA
TCTGTTTTCTCCCCAGAGCAGCTGCTGTTCTGTCTGCTGGGCAGAGGGCTGGGTTCCTCCGAGGTAGGCAGGGG
CCTCAACCCAGAGCCCCCTCTCACACCCTCTTTCAACTCAGGCTTATGTCTCTCCCTCCTCCCCACCCCCACCCC
AGGAAGAGGAGATCCCAGAACTGGAGATTGACGTGGATGAGCTCCTGGACATGGAGAGTGACGATGCCCGGGCTG
CCAGGGTCAAGGAGCTGCTGGTTGACTGTTACAAACCCACAGAGGCCTTCATTTCTGGCCTGCTGGACAAGATCC
GGGGCATGCAGAAGCTGAGCACACCCAGAAAGTGAGGGTCCCCGACCCAGGAGAACGGTGGCTCCACAGGA
CAATCGCTGCCCCCAACCTCGTAGCAACAGCAATACCGGGGGACCTGCGGCCAGGCCTGGTGCCATGAGCAGG
GCTCCTCGTGCCCCCTGGCCCAGGGGTCTCTTCCCCTGCCCCCTCAGTTTCCACTTTTGGGGTTTTTTATTGTTA
TTAAACTGATGGGACTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 839

MLGRHICWVPSPRSPTLAVWPCLSPPVPTGRDRKLPPHPALGSLPWHGPDFSSPEQLLFCLLGRGLGSSEVGRG
LNPEPLSHPLSTQAYVSPSSPTPTPGRGDPRTGD

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FIGURE 840A

AAGTCAGCGCTGGAGTCGGCTAGGCGGCTGGAAACGGCGGCTGCCGCCGGTGACTCAGGGAGGCGGGAGGCGGGG
GAGGAGCTCTTCCTGCAGGCGTGAAACCATGCTGCTCACGCTCGGAGAAAGTTGGCCGGTATTGGTGGGGAGGA
GGTTTCTCAGTCTGTCCGCAGCCGACGGCAGCGATGGCAGCCACGACAGCTGGGACGTGGAGCGCGTCGCCGAGT
GGCCCTGGCTCTCCGGGACCATTTCGAGCTGTTTCCACACCGACGTTACCAAGAAGGATCTGAAGGTGTGTGTGG
AATTTGATGGGGAATCTTGGAGGAAAAGAAGATGGATAGAAGTCTACAGCCTTCTAAGGAGAGCATTTTTAGTAG
AACATAATTTGGTTTTAGCTGAACGAAAGTCACCTGAAATTTCTGAACGAATTGTACAGTGGCCTGCAATAACGT
ACAAACCTCTGTTGGACAAAGCTGGTTTGGGATCCATAACTTCTGTTTCGCTTTCTGGGAGATCAACAAAGAGTAT
TTCTTTCTAAAGACCTTTTGAAGCCTATACAGGATGTAAACAGTCTTCGACTTTCTCTTACGGATAATCAGATTG
TCAGTAAAGAATTTCAAGCTTTGATTGTGAAGCATTAGATGAAAGCCATCTTTTAAAGGTGACAAAACTTAG
TTGGTTTCAAGAAGTAAAAATTTATAGCTTGGACCCATCTACTCAGTGGTTTTTCAGCAACCGTTATAAATGGAAACC
CAGCATCAAAAACCTCTCAAGTCAACTGTGAGGAGATTCCAGCACTGAAAATTGTTGATCCGTCAGTATTGATG
TTGAAGTTGTACACGATAACCTTGTGACATGTGGTAATTCTGCAAGAATTGGAGCTGTAAAACGCAAGTCTTCTG
AGAATAATGGAACCTGGTTTCCAAACAAGCAAAATCTTGCTCTGAGGCCTCTCCAGTATGTGTCTGTGCAGT
CTGTACCTACAACAGTTTTTAAAGGAGATACGTGGCTGTACTGCGGCAACTCCACCTAGTAAGGACCCAAGAC
AGCAAAGTACTCCCCAGGCTGCCAACTCTCCACCTAACCTTGGAGCAAAAATTCTCAAGGATGTCATAAACAAA
GTTTACCAGAGGAAATTTCTTCCTGTCTAAATACAAAGTCTGAAGCTCTGAGAAACAAAACCAGATGTCTGCAAAG
CAGGGTTGCTCTCAAAGTCTCTCAGATTGGAACCTGGAGACTTGAAAATTCTGACTGAGCCAAAAGGCAGCTGTA
CTCAGCCTAAGACAAAACACTGATCAGGAAAACAGATTGGAGTCTGTTCCACAAGCATTGACTGGCCTTCCTAAGG
AGTGCTTACCTACAAAGGCTTCTTCTAAGGCAGAATTGGAAATTGCCAATCCTCCTGAACTGCAGAAGCACCTAG
AACATGCACCTTCCCCATCGGATGTTTCAAATGCACCAGAAGTGAAAGCAGGTGTCAATAGTGATAGCCCTAATA
ACTGTTTCAGGAAAAAAGGTAGAACCCTTCAGCTTTAGCTTGGCGATCACAGAATTTAAAGGAATCTTCAGTAAAG
TAGATAATGAAAGCTGTTGTTCAAGAAGCAACAATAAAATCCAGAATGCCCCATCCAGGAAGTCGGTTTTGACAG
ACCCAGCTAAACTCAAAAAGCTGCAACAGAGTGGCGAGGCCTTCGTACAGGATGATTCTTGTGTGAACATCGTGG
CACAGTTGCCTAAATGCCGAGAGTGTGCTTGGACAGTCTCCGCAAGGATAAGGAGCAACAGAAGGACTCACCTG
TGTTTTGCCGCTTCTTCACTTCAGGAGGTTACAATTCAACAAACATGGTGTGTTGCGGGTAGAAGGCTTCTTAA
CACCAAAACAAGTATGACAATGAAGCAATTGGCTTGTGGTTACCTTTAAACCAAAAACGTTGTGGGGATTGATTGG
ACACAGCAAAGTACATCTTGGCCAACATTGGAGACCACTTCTGTCAAATGGTGATTTCTGAAAAGGAAGCTATGT
CAACTATTGAGCCACACAGACAGGTTGCTTGGAAAGCGAGCTGTCAAAGGTGTTGAGAAATGTGTGATGTGTGCG
ACACCACCATCTTCAACCTGCACTGGGTGTGTCTCGGTGTGGGTTTGGAGTATGTGTGGACTGCTACCGGATGA
AGAGAAAGAATTGCCAACAGGGTGTGCTTACAAGACTTTCTCTTGGCTAAAATGTGTGAAGAGTCAGATACATG
AACCAGAGAACTTAATGCCCACACAGATCATTCTGGAAAAGCACTCTATGATGTTGGAGACATTGTTTCATTCTG
TAAGAGCGAAATGGGGAATAAAGGCAAACTGCCCTTGTTCAAACAGGCAATTCAAACCTTTTTCAAAGCCAGCCT
CAAAGGAAGACCTAAAACAGACTTCTTTAGCTGGAGAAAAACCGACTCTTGGTGCAGTGCTCCAGCAGAATCCCT
CAGTGTGGAGCCAGCAGCTGTGGGTGGGGAAGCAGCCTCCAAGCCAGCCGGCAGCATGAAGCCTGCCTGTCCAG
CCAGCACATCTCCTCTAAACTGGCTGGCCGACCTAACCCAGCGGGAATGTCAACAAGGAAAACAAGGAAAAACAAC
CAACAATGCCAATTTTAAAGAATGAAATCAAATGCCTTCCACCCCTCCACCTTTAAGCAAATCCAGCACAGTCC
TCCATACGTTTAAACAGCACAAATTTTACACCCGTAAGCAACAACAATTTCTGGTTTCTCCGGAATCTCTTGAATT
CTTCTACAGGAAAGACAGAAAATGGACTCAAGAATACACCAAAAATCCTTGATGACATCTTTGCCTCTTTGGTGC
AAAAATAAGACGACTTCTGATTTATCTAAGAGGCCTCAAGGACTAACCATCAAGCCCAGCATTCTGGGCTTTGACA
CTCCTCACTATTGGCTTTGTGATAATCGCTTGCTGTGCTTGCAAGACCCCAACAATAAGAGCAACTGGAATGTGT
TTAGGGAGTGCTGGAAACAAGGGCAGCCAGTGATGGTGTCTGGAGTGCATCATAAATTGAACTCTGAACCTTTGGA
AACCTGAATCCTTCAGGAAAGAGTTTGGTGAGCAGGAAGTAGACCTAGTTAATTGTAGGACCAATGAAATCATCA
CAGGAGCCACAGTAGGAGACTTCTGGGATGGATTGAAAGATGTTCCAAATCGTTTGAAAATGAAAAAGAACCA
TGGTGTGAAACTTAAGGACTGGCCACCAGGAGAAGATTTTAGAGATATGATGCCTTCCAGGTTTGATGATCTGA
TGGCCAACATTCCACTGCCCCAGTACACAAGGCGAGATGGCAAACCTGAATTTGGCCTCTAGGCTGCCAACTACT
TTGTTTCGCCAGATCTGGGCCCCAAGATGTATAATGCTTATGGATTAATCACTCCTGAAGATCGGAAATATGGAA
CAACAAATCTTCACTTAGATGTATCTGATGCAGCTAATGTATGGTCTATGTGGGAATTCCCAAAGGACAGTGTG
AGCAAGAAGAAGAAGTCCTTAAGACCATCCAAGATGGAGATTCTGACGAACTACAATAAAGCGATTTATTGAAG

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FIGURE 840B

GAAAAGAGAAGCCAGGAGCACTGTGGCACATATATGCTGCAAAGGACACGGAGAAGATAAGGGAATTTCTTAAAA
AGGTATCAGAAGAGCAAGGTCAAGAAAACCCAGCAGACCACGATCCTATTCATGATCAAAGCTGGTATTTAGACC
GATCATTAAAGAAAACGTCTTCATCAAGAGTATGGAGTTCAAGGCTGGGCTATTGTACAGTTTCTTGGGGATGTGG
TGTTTATCCCGGCAGGAGCTCCACATCAGGTTTATACTTATATAGCTGCATCAAAGTGGCTGAAGATTTTGT
CTCCAGAGCATGTTAAACACTGCTTCTGGCTTACTCAGGAATTCGATATCTGTCACAGACTCATACCAATCAG
AAGATAAATTACAGGTGAAGAATGTTATCTACCATGCAGTGAAAGATGCAGTTGCTATGCTGAAAGCCAGTGAAT
CCAGTTTTGGCAAACCTTAACTCTCCCTGCACATTGGAAATGAATTACAGGCAGCTGTTCAAACCTCTTCAGGCAGG
ATTCCTGTGGACTTTGAGATTCAITGTTACCTCATCTTCTTTTTTAAACTGTACCCAACCTTGTGAGGGTACTCTGT
CTAATGTATATTTCTAGTGTGTTACAGACAGTAAATGTGTATATGTAGTAACTATTTACAGAACATGCATCCTTAA
ACTGTGACTTCTCACCTAGTGCAGAACTTTTACCAGGCTGTAAAAGCAAACCTCGTATCAGCTCTGGAACAATA
CCTGCAGTTATTCTTCAGCTGTTTGGACAACCTTAGATTGGGTTTATAACTATTAGGAATCACTGCACAGTTTATT
TGGGTTGTGTTTTGTGTCTGAGTCCCCTCCCTCATCCCTTAGGGTCCAGAAGAGCAATGGAGGAAGTGACAGCTA
ATGTTGCAGTTCTTATTGTATGGCATAGGACTGGCATTATATAGCAGAAATCAACTACTGTACAATTTCTTGGGG
TTAACCATCTTTAGTTAAATGGAATTTTAATTTAAATGACGCTTTGCTAATTTAAGTGTTAAGCATTGTCATT
AAAATATTCATATAAT

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FIGURE 841

MVLTILGESWPVLVGRRFLSLSAADGSDGSHDSWDVERVAEWPWLSGTIRAVSHTDVTKKDLKVCVEFDGESWRKR
RWIEVYSLRRRAFLVEHNLVLAERKSPEISERIVQWPAITYKPLLDKAGLGSITSVRFLGDQQRVFLSKDLLKPI
QDVNSLRSLTDNQIVSKEFQALIVKHLDESHLLKGDKNLVGSEVKIYSLDPSTQWFSATVINGNPAASKTLQVNC
EEIPALKIVDP SLIHVEVVHDNLVTCGNSARIGAVKRKSENNGTLVSKQAKSCSEASPSMCPVQSVPTTVFKEI
LLGCTAATPPSKDPRQOSTPQAANSPPNLGAKIPQGCHKQSLPEEISSCLNTKSEALRTKPDVCKAGLLSKSSQI
GTGDLKILTEPKGSC TQPKTNTDQENRLESVPQALTGLPKECLPTKASSKAELEIANPPELQKHLEHAPSPSDVS
NAPEVKAGVNSDSPNNCSGKKVEPSALACRSQNLKESSVKVDNESCCSRSNKIQNAPSRKSVLTDPAKLKKLQQ
SGEAFVQDDSCVNIVAQLPKCRECRDLSLRKDKEQQKDSPVFCRFFHFRLQFNKHGVL RVEGF LTPNKYDNEAI
GLWLPLTKNVVGIDLD TAKYILANIGDHFCQM VISEKEAMSTIEPHRQVAWKRAVKGVREMC DVC DTTIFNLHWV
CPRCGFVCVDCYRMKRKNCQQGAAYKTF SWLKCVKSIHEPENLMPTQIIPGKALYDVGDIVH SVRAKWGIKAN
CPCSNRQFKLFSKPASKEDLKQTS LAGEKPTLGAVLQQNPSVLEPAAVGGEAASKPAGSMKPAC PASTSPLNWLA
DLTSGNVNKENKEKQPTMPILKNEIKCLPPLPLSKSSTVLHTFNSTILTPVSNNNSGFLRNLLNSSTGKTENGL
KNTPKILDDIFASLVQNKTTS DLSKRPQGLTIKPSILGFDTPHYWLC DNRLLC LQDPNNKSNWNVFRECWKQGQP
VMVSGVHHKLNSELWKPE SFRKEFGQEVDLVNCR TNEIITGATVGDFWDGFEDVPNRLKNEKEPMVLKLDWPP
GEDFRDMMPSRFDDL MANIPLPEYTRRDGKLN LASRLPNYFVRPDLGPKMYNAYGLITPEDRKYGTTLHLDVDSD
AANVMVYVGIPKGQCEQE EEEVLKTIQDGDSELT IKRFIEGKEKPGALWHIYAAKDTEKIREFLKKVSEEQGOEN
PADHDPIHDQSWYLD RSLRKRLHQEYGVQGWAI VQFLGDVVFIPAGAPHQVHNLYSCI KVAEDFVSPEHVKHCFW
LTQEFRYLSQTHTNHEDKLQVKNVIYHAVKDAVAMLKASESSFGKP

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FIGURE 842

CTAACCCAGTATGTTCTTCTTTTTTATGTAAGGNACAGCTTTCTCCACAGAGTCCTTTCTGCTGGTGAGGACAGC
ATTTCTGAGCAGGGCTTTGTTCTCTATGTGCATTAGGACTTTTATCATGCCCTTGTTCTGTGTGTAGTTACTTGA
CAGCATCAAATGCCGCCTCTTCCTAATGTCCTTCAAGTTTTCATGAAGTAGCAACCCACCTTCCACCATGGTTC
TGGGCGCCTGATTTTGCTGTGACTC

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FIGURE 843

GAAGGGGGCTGGGCGGAGCCCCAGGCTCAGAGGAGGAGGAGGAGGAGCAGGAGGAGAGCCTGGCGGTGGCGGA
GCAGGGAAAAGGGGCGCAGGGAGTCTGAAAGCTCCAGGAGCAGCAGAAGGCCAGTGGCCGGTCTCCAACCAGTAC
TGAGAAGCGCATGAGCTTCGAGTCCATTTCTTCCCTGCCAGAGGTTGAGCCGACCCCTGAGGCTGGGAGTGAGCA
AGAGGTATTTTCTGCTGTGGAAGGGCCCAGTGCCGAGGAGACGCCTTCAGACACAGAATCTCCAGAAGTCTTGGA
GACACAGCTTGATGCCCACCAGGGCCTTCTGGGGATGGACCCCCAGGTGACATGGTGGACTTCGTGGCAGCTGA
GAGCACTGAGGACCTTAAGGCCCTGAGCAGCAGGAGGAAGAAGAAATGGGAGGTGCCGCCAGGAGCCTGAGAG
CCTTCTGCCACCTCTGTGCTGGACCAGGCCAGCGTCATTGCGGAGCGATTTGTCAGCAGCTTCTCTCGGCGGAG
CAGCGTGGCACAGGAGGACAGCAAGTCCAGTGGCTTTGGGAGCCCGCGGCTGGTCAGCCGGAGCAGCAGCGTGCT
CAGCCTGGAGGGCAGCGAGAAGGGCCTGGCCCGGCATGGCAGTGCCACAGACTCCCTCAGCTGTCAGCTCTCCCC
AGAAGTGGACATCAGTGTGGGGGTGGCCACAGAGGACAGCCCTTCTGTCAATGGGATGGAGCCCCCAAGCCCAGG
CTGCCAGTGGAGCCTGACCGGTCTTCTGCAAGAAGAAGGAATCAGCACTCTCCACCCGAGACCGGCTGTTGCT
AGACAAGATTAAGAGCTGGTGGCCCCACTGCACCCCGCATCGTGCAGCTCTCCACGTAATGGACAGCCACGTG
AGCGAGCGCGTCAAGAACAAGGTCTACCAGCTGGCCCGCCAGTACAGCCTCCGGATCAAGAGCAACAAGCCAGTG
ATGGCCAGGCCACCACTGCAGTGGGAAAAGGTGGCCCTGAGAGGGATGGGAAGAGCCCCACTGTGCCCTGTCTA
CAGGAAGAGGCTGGAGAGCCATTAGGTGGCAAAGGTAAGAGGAAGCCGGTGCTGTCTCTATTTGACTATGAGCAG
CTGATGGCCAGGAGCACAGCCCTCCCAAGCCCTCCTCGGCTGGGGAGATGTCACCACAGCGTTTTCTTCTTCAAC
CCGTCTGCTGTGAGCCAGAGGACCACCTCGCCTGGGGGCGGCCCTCCGCCCGAGCCCCCTCAGCCCCACAGAG
ACCTTCAGCTGGCCCCGACGTCCGTGAGCTCTGCTCCAAGTATGCCTCCCGCATGAGGCACGCCGAGCAGGGGGC
GGCCGGCCCCCGCGGCCACCCGTCAACAGGAGCCACTCGGTGCCGAGAACATGGTAGAGCCACCTCTGTGCGGC
AGGGTGGGCGCTGCCGCAGCCTGAGCACCAAGAGGGGCGGGGAGGCGGAGAGGCTGCCCAATCCCCTGGGCCT
CTGCCCCAGAGCAAGCCGGATGGAGGCGAGACCCTGTATGTCACTGCAGACCTCACCTGGAGGACAACCGGCGG
GTGATTGTGATGGAGAAGGGACCCCTTCCCAGCCCCACTGCAGGGCTGGAGGAGAGCAGTGGCCAGGGACCAAGC
TCACCGGTGGCCCTGCTGGGGCAGGTTTCCAGGACTTCCAGCAGTCTGCAGAGTGCCAGCCGAAGGAAGAGGGTTCC
AGGGACCCGGCAGACCCGAGCCAGCAGGGCAGAGTGAGAAACCTTAGAGAGAAGTCCAGGCCTTGAACCTGTGTC
GGTTGATGCTGACTCCTGGGGGAGGGAGGAGTCATGTTGGAGGTTGGGGAAGAACCTGGGCATCCTTCCCCTCAA
GCCTGGGCTCATGGAGCCCCTGCCAGGGCCCTCAGGTGGGCGGAAAGTCCATCCCCTCCGCCCTTCCAGGAAGGA
TGCTCCCGTGTGAGGGGTCTCCTGCCGTGTGCCATCCACTGGGGCTCGAGACAATTTCCCACTCACCTGTGAGGC
CGGTGTGGCTGCTTCCCTTGTAATAGTTGTTCTCTGGTAAGAAGCCAAATATTTAAGCTCACTTCTTCCCAGAG
AGAGGAAGCTCTGCTCAGGCCTCCAGCGTTGGCTGGCCATGGCCACAGCCAGATGGAGGAGCCCATCCCCAGGAG
ACTCAGGCAGTGGCCTGGAGAGGCTTTGTTCTGTAACGGTGCCTTTTCTTAGGGTCCAGGCAGGAATGAAGCCAA
TAATTTATTGCTTTCCATTCTGTGGTATGATGTGCGTGTGCGTGAGTGTGTGGCCCCCTGTTTATTTCCCCTCCTGT
CAAGAATGAAGTGGATTGAGTTCAGGTACTTTTGAGGGTTGTTGTGCTGACCCTGTGGTTGTGCTGATGTACAC
ACATTTTATTATTTGCCAATGGTGCAATAACCACTGCTGACCAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 844

AATCCAACCTCACCTCCATGTTCAAGGATGTCCCTCTGACTGCAGAAAGAGGTGGAATTTGTGGTGGAAAAAGCATT
GAGCATGTTTCTCCAAGATGAATCTTCAAGAAATACCACCTTTGGTCTATCAGCTTCTGGTTCTCTCCTCCAAGGG
AAGCAGAAAAGAGTGTTTTGGAAGGAATCATAGCCTTCTTCAGTGCCTAGATAAGCAGCACAATGAGGAACAGAG
TGGTGACGAGCTATTGGATGTTGTCACTGTGCCATCAGGTGAACTTCGTCTATGTGGAAGGCACCATTATTCTACA
CATTGTGTTTGGCCATCAAATTGGACTATGAACTAGGCAGAGAACTCGTGAAACACTTAAAGGTAGGACAGCAAGG
AGATTCCAATAATACTTAAGTCCCTTCAGCATTGCTCTTCTTCTGTCTGTAAACAAGAATACAAAGATTTTCAGGA
CCAGGTGCTTGATCTTTTAAAGACTTCGGTTGTAAAGAGCTTTAAGGATCTTCAACTCCTCCAAGGCTCAAAATT
TCTTCAGAATCTAGTTCCTCATAGATCTTATGTTTCAACCATGATCTTGGAAGTAGTGAAGAATAGCGTTTCATAG
CTGGGACCATGTTACTCAGGGCCTCGTAGAACTTGGTTTCATTTTGATGGATTTCATATGGGCCAAAGAAGGTTCT
TGATGGAAAACTATTGAAACCAGCCCAAGTCTTTCTAGAATGCCAAACCAGCATGCATGTAAGCTCGGAGCTAA
TATCCTGTGGAACCTTTTAAAGATCCATGAGATGATCAGACAAGAAATTTTGGAGCAGGTCCTCAACAGGGTTGT
TACCAGAGCATCTTCTCCCATCAGTCATTTCTTAGACCTGCTTTCAAATATCGTCATGTATGCACCCTTAGTTCT
TCAAAGTTGTTCTTCTAAAGTCACAGAAGCTTTTGAATATTTGTCCTTTCTGCCCCCTTCAGACTGTACAAAGGCT
GCTTAAGGCAGTGCAGCCCCCTTCTCAAAGTCAGCATGTCAATGAGAGACTGCTTGATACTTGTCTTTCGGAAAGC
TATGTTTGCCAACCAGCTTGATGCCCGAAAATCTGCAGTTGCTGGGTTTTTGTGCTCCTGAAGAACTTTAAAGT
TTTAGGCAGCCTGTCATCCTCTCAGTGCAGTCAGTCTCTCAGTGTCACTCAGGTTTCATGTGGATGTTTCACAGCCA
TTACAATTCTGTCGCCAATGAAACTTTTTGCTTGAATCATGGATAGTTTGAGGAGATGCTTAAGCCAGCAAGC
TGATGTTGCACTCAGCTTTTATGAGGGGTTTTATGATGTTCTTCGAAGGAACCTCTCAGCTGGCTAATTCAGTCAT
GCAAACTCTGCTCTCACAGTTAAACAGTTCTATGAGCCAAAACCTGATCTGCTGCCTCCTCTGAAATTAGAAGC
TTGTATTCTGACCCAAGGAGATAAGATCTCTCTACAAGAACCCTGGATTATCTGCTGTGTTGTATTTCAGCATTG
TTTGGCCTGGTATAAGAATACAGTCATACCCTTACAGCAGGGAGAGGAGGAAGAGGAGGAGGAAGAGGCATTCTA
CGAAGACCTAGATGATATATTGGAGTCCATTACTAATAGAATGATTAAGAGTGAGCTGGAAGACTTTGAACTGGA
TAAATCAGCAGATTTTTCTCAGAGCACCAGTATTGGCATAAAAAATAATATCTCTGCTTTTCTTGTGATGGGAGT
TTGTGAGGTTTTAATAGAATACAATTTCTCCATAAGTAGTTTCAGTAAGAATAGGTTTGAGGACATTCTGAGCTT
ATTTATGTGTTACAAAAAACTCTCTGACATTCTTAATGAAAAAGCGGGTAAAGCCAAAACCTAAATGGCCAACAA
GACAAGTGATAGTCTTTTGTCCATGAAATTTGTGTCCAGTCTTCTCACTGCTCTTTTCAGAGTCTTGCTATGGAG
ATACACTTCAATTCCTACTTCAGTGGAAAGAGTCGGGAAAGAAAGAGAAAGGAAAGAGCATCTCACTGCTGTGCTT
GGAGGGTTTACAGAAAATATTCAAGTGTGTGCAACAGTTCTATCAGCCCAAGATTTCAGCAGTTTCTCAGAGCTCT
GGATGTCACAGATAAGGAAGGAGAAGAGAGAGAAGATGCAGATGTCAGTGTCACTCAGAGAACAGCATTCCAGAT
CCGGCAATTTTCAGAGGTCCTTGTGAATTTACTTAGCAGTCAAGAGGAAGATTTTAAATAGCAAAGAAGCCCTCCT
GCTAGTCACGGTTCTTACCAGTTTGTCCAAGTTACTGGAGCCCTCCTCTCCTCAGTTTGTGCAGATGTTATCCTG
GACATCAAAGATTTGCAAGGAAAACAGCCGGGAGGATGCCTTGTTTTGCAAGAGCTTGATGAACTTGCTCTTCAG
CCTGCATGTTTCGTATAAGAGTCTGTCTATTCTGCTGCGTGAATTTGTCAGGATATCCACGGGCATCTGGGAGA
TATAGACCAGGATGTAGAGGTGGAGAAAACAAACCACTTTGCAATAGTGAATTTGAGAACGGCTGCCCCCACTGT
CTGTTTACTTGTCTGAGTCAGGCCGAGAAGGTTCTAGAAGAAAGTGGACTGGCTAATCACCAGCTTAAGGGACA
AGTGAGCCAAGAAACCTTATCAGAGGCCTCTTCTCAGGCAACCCCTACCAAATCAGCCTGTTGAGAAAGCTATCAT
CATGCAACTGGGAACTCTGCTTACATTTTTTCCACGAGCTGGTGCAGACAGCTCTGCCATCAGGCAGCTGTGTGGA
CACCTTGTTAAAGGACTTGTGCAAAATGTACACCACACTTACAGCCCTTGTCAGATATTATCTCCAGGTGTGTCA
GAGCTCCGGAGGAATTCCAAAAAATATGGAAAAGCTGGTGAAGCTGTCTGGTTCTCATCTGACCCCCCTGTGTTA
TTCTTTTCAATTTCTTACGTACAGAATAAGAGTAAGAGCCTGAACTATACGGGAGAGAAAAAGGAGAAACCTGCTGC
CGTTGCCACAGCCATGGCCAGAGTTCTTCGGGAAACCAAGCCAATCCCTAACCTCATCTTTGCCATAGAACAGTA
TGAAAAATTTCTCATCCACCTTTCTAAGAAGTCCAAGGTGAACCTGATGCAGCACATGAAGCTCAGCACCTCAGG
AGACTTCAAGATCAAAGGAAACATCCTAGACATGGTTCTTCGAGAGGATGGCGAAGATGAAAATGAAGAGGGCAC
TGCATCAGAGCATGGGGGACAGAACAAGAACCAGCCAAGAAG

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FIGURE 845

MFKDVPLTAEVEFVVEKALSMFSKMNLQEIPPLVYQLLVLSKSGSRKSVLEGIIAFFSALDKQHNEEQSGDELL
DVVTVPSELRHVEGTIILHIVFAIKLDYELGRELVKHLKVGGQSDSNNNLSPFSIALLLSVTRIQRFDQVLDL
LKTSVVKSFKDLQLLQGSKFLQNLVPHRSYVSTMILEVVKNSVHSDHVTQGLVELGFILMDSYGPKKVLDGKTI
ETSPSLSRMPNQHACKLGANILLETFKIHEMIRQEILEQVLNRVVTRASSPISHFLDLLSNIVMYAPLVLQSCSS
KVTEAFDYLSFLPLQTVQRLLKAVQPLLKVSMRDCILVLRKAMFANQLDARKSAVAGFLLLLKNFKVLGSL
SSQCSQSLSVSQVHVDVHSHYNSVANETFCEIMDSLRRCLSQQADVRLTYEGFYDVLRRNSQLANSVMQTLLS
QLKQFYEPKPDLLPPLKLEACILTQGDKISLQEPLDYLLCCIQHCLAWYKNTVIPLQQGEEEEEEFAFYEDLDD
ILESITNRMKSELEDFELDKSADFSQSTSIGIKNNISAFVLMGVCEVLEYNFSISSFSKNRFEDILSLFMCYK
KLSDILNEKAGKAKTKMANKTSDSLLSMKFVSSLLTALFRVLLWRYTSIPTSVESGKKEKGKSSISLLCLEGLQK
IFSAVQQFYQPKIQQLRALDVTDKERGEEREDADVSTQRTAFQIRQFQRSLNLLSSQEEDFNSKEALLVTVL
TSLSKLLEPSSPQFVQMLSWTSKICKENSREDALFCKSLMNLLFSLHVSYSKSPVILLRDLSDIHLGLDIDQDV
EVEKTNHFAIVNLRTAAPTVCLLVLSQAEKVLEEVDWLITKLKGQVSQETLSEASSQATLPNQFVEKAIIMQLGT
LLTFFHELVTALPSGSCVDTLKDLCKMYTTLTALVRYYLQVCQSSGGIPKNMEKLVKLSGSHLTPLCYSFISY
VQNKSKSLNYTGEKKEKPAAVATAMARVLRETKPIPNLIFAIEQYEKFLIHLKSKSVNLMQHMKLSTSRDFKIK
GNILDMVLREDGEDENEETASEHGGQNKPAKK

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FIGURE 846A

GGACGAGTCGAGCCTCCTGCGGCGCCGCGGGCTCAGAAAGGAGCTGAGCCTGCCACGCCGAGGACGTGGCTGCCG
CAGCGGGAACCGCAAGAGCTTGGTGGTAGGAACGCCCTCCCCGACCCTCTCCCGGCCCTGTGCGCCATTGTCGGT
CCCAACGGCAGGCAGCAGCCCCCTTGGATAGTCCTCGGAATTTCTCGGCTGCCTCTGCCCTAAATTTCCCTTTGC
CCGGAGGGCAGACGGCAGAAGATGGTCCCTCGCGTCTCTCCCATCTTCCGGCTATGGAACCAACACACCCAGCTC
CACCCTCTCGTCAAGCTCATCCTCCCGGGAACGTCTCCACCAGCTTCCCTTCCAGCCGACGCCGGACGAGCTGCA
CTTCCTGTCCAAGCACTTCCGCAGCTCAGAGAATGTGCTTGATGAGGAAGGCGGCCGGTCACCCCGCTCCGACC
CCGCTCTCGCAGTCTCAGCCCCGGGCCGTGCAACGGGGACCTTCGACAATGAGATTGTCATGATGAATCACGTGTA
CCGGGAGAGGTTCCCCAAGGCCACAGCACAGATGGAGGGCCGTCTGCAGGAGTTCTTGACGGCCTACGCGCCCGG
CGCCCGGCTGGCGCTGGCTGATGGCGTCTTGGGCTTCATCCACCACCAGATCGTCGAGCTGGCCCGAGACTGCTT
GGCCAAGTCTGGCGAGAACCTCGTCACCTCCCGCTACTTCTTAGAGATGCAGGAGAAGCTGGAGCGGCTTCTGCA
GGATGCCCATGAGCGTTCGGACAGTGAGGAGGTGAGCTTCATCGTCCAGCTTGTCCGGAACCTGCTGATCATCAT
CTCACGGCCAGCTCGGCTGCTGGAGTGTCTGGAGTTTGACCCTGAGGAATTTTACCACCTGCTGGAGGCGGCTGA
GGGCCATGCGCGGGAGGGCCAAGGCATTAAGACTGACCTTCCACAGTACATCATTGGGCAGCTGGGCTGGCCAA
GGACCCCTGGAGGAGATGGTGCCACTGAGTCACCTCGAAGAAGAACAGCCCCAGCACCTGAGTCCCCAGAGAG
CCGCGCCCTGGTCCGCCAGTCACGGAGGAAGCCATGCGAAAGCGACTTTGAGACCATCAAACCTCATTAGCAACGG
AGCCTATGGGGCCGTCTACCTGGTGCGGCACCGTGACACACGGCAGCGCTTTGCCATCAAGAAGATCAACAAACA
GAACCTGATCCTGCGTAACCAGATCCAGCAGGTCTTTGTGGAGCGTGACATTCTACCTTTGCCGAGAACCCCTT
TGTGGTCAGCATGTTCTGCTCCTTTGAGACCCGGCGCCACCTATGTATGGTCATGGAATACGTGGAAGGCGGCGA
CTGCGCCACGCTCCTGAAGAACATGGGCGCGCTGCCCGTGACATGGCCCGCCTGTACTTCGCCGAGACGGTGTT
GGCGCTGGAGTACCTGCATAACTATGGCATCGTGCACCGTGACCTCAAACCAGACAATCTGCTCATCACCTCGCT
TGCCACATCAAGCTCACGGACTTCGGCCTGTCCAAGATCGGCCTCATGAGCATGGCCACCAACCTCTATGAGGG
CCACATCGAGAAGGACGCCCCGAGAGTTTCATCGACAAGCAGGTGTGTGGGACGCCGGAGTACATAGCCCCGAGGT
GATCTTCCGCCAGGGCTATGGGAAGCCAGTGGACTGGTGGGCCATGGGCGTCGTCTCTATGAGTTTCTGGTGGG
CTGCGTGCCCTTTCTTTGGAGATACCCCCGAGGAACCTTCGGTCAGGTGGTCAGCGATGAGATCATGTGGCCAGA
GGGAGATGAGGCCCCCTCCAGCAGACGCCCAGGACCTCATACCAGGTTGCTCCGGCAGAGCCCGCTGGACCGTCT
GGGCACTGGTGGCACCCACGAAGTGAAGCAGCACCCCTTTTTCTGGCCCTGGACTGGGCAGGGCTTCTCCGACA
CAAAGCCGAGTTCGTGCCCCAGCTCGAAGCCGAGGATGATACCAGCTACTTTGACACACGTTCCGAACGTTACCG
CCATCTGGGCTCCGAGGACGACGAGACCAATGATGAAGAATCGTCCACAGAGATCCCCAGTTCTCCTCTGCTC
CCACCGGTTTACGAAGGTCTACAGCAGCTCTGAGTTCTTGCCCGTCCAGCCCACTCCTACCTTCGCTGAAAGGAG
CTTCAGTGAAGACCGGGAGGAGGGGTGGGAGCGCAGCGAAGTGGACTATGGCCGCCGGCTGAGTGCTGACATCCG
GCTGAGGTCTTGACATCCTCTGGATCCTCTGTGAGTCATCTTCGTCCAGCCCGAGCGGGGTCCAGCCCATC
TCTCCTGAATACCATCAGCCTGGACACAATGCCAAGTTTGCTTCTCATCAGAGGATGAGGGGGTAGGCCCAGG
CCCTGCAGGCCCCAAGAGGCCCGTCTTCATTCTAGGGGAGCCTGACCCCCCACCAGCGGCCACCCAGTGATGCC
CAAGCCCTCGAGCCTTTCTGCCGACACAGCTGCTCTCAGCCACGCCCGCCTACGGAGCAATAGCATCGGCGCCCG
ACACTCCACACCAAGGCCCTCTGGATGCCGGCCGGGGCCGCGCCTTGGGGGCCCAAGAGACCCAGCCCTGAGAA
GTCCAGAGCCTCCTCCAGCGGTGGCAGTGGTGGCGGCAGTGGGGGCCGCGTGCCCAAGTCAGCCTCTGTCTCTGC
CCTGTCCCTCATCATCACGGCAGATGATGGCAGCGCGGCCCCCTCATGAGCCCCCTTTCCCCGCGCTCTCTGTC
CTCGAACCCGTGCTCCGTGACTCTTCGCCGAGCCGAGACCCGTCCCCCGTGTGTGGCAGCCTGCGGCCCCCAT
CGTTATCCACAGCTCTGGCAAGAAGTACGGCTTCAGCCTGCGGGCGATCCGCGTCTACATGGGTGATAGCGACGT
CTACACTGTGCACCACGTCGTCTGGAGTGTGGAGGACGGAAGCCCCGCCAGGAGGCGGGCTGCGGGCTGGGGA
CCTCATCACCCACATCAACGGGGAGTCAGTGCTGGGGCTGGTGACATGGACGTCGTGGAGCTGCTGCTGAAGAG
CGGCAACAAGATATCCCTGCGGACCACAGCCCTGGAGAACACCTCCATCAAGGTGGGCCCCGCCGGAAGAATGT
GGCCAAGGGCCGATGGCACGCAGGAGCAAGAGGAGCCGTGCGCGGGAGACCCAGGATCGGCGGAAGTCACTTTT
CAAGAAGATCTCCAAGCAGACCTCCGTGCTGCACACCAGCCGAGCTTCTCCTCCGACTCCACCACTCACTGTC
ATCCAGTGAGAGCCTCCCCGGCTCGCCACCCACAGCCTCTCCCCAGCCCCACCACTCCCTGCCGAAGCCCAGC
CCCTGATGTCCAGCAGATACCACTGCATCCCCACCCAGCGCATCCCCGAGCTCCAGCAGCCCCGCTCCCCAGC
TGCTGCTGGCCACACCCGCCCGAGCTCCCTGCACGGCCTGGCTGCCAAGCTTGGGGCACCCCGCCCCAAGACTGG
CCGCCGCAAGTCCACCAGCAGCATCCCGCCCTCCCGCTGGCCTGCCCGCCCATCTCCGCGCCCCACCCCGCTC

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FIGURE 846B

GCCCTCGCCCCTGCCCGGGCACCCGCCCGCACCTGCCCGATCCCCGCGGCTGCGCCGGGGCCAGTCAGCTGACAA
GCTGGGCACAGGGGAGCGGCTGGATGGGGAGGCGGGGCGGCGCACTCGTGGGCCAGAGGCCGAGCTCGTGGTCAT
GCGGCGGCTGCACCTGTCCGAGCGCCGAGACTCCTTCAAGAAGCAGGAGGCCGTGCAGGAGGTTAGCTTCGATGA
GCCGCAGGAGGAGGCCACTGGGCTGCCACCTCAGTGCCACAGATCGCCGTGGAGGGCGAGGAAGCCGTGCCAGT
AGCTCTCGGGCCCACCGGAAGAGACT**TGAT**CCCCCTGCCAGGTCTCTCCCTGGCATCAAAGTTACGCGTTTTCTTGT
GCAATGTTTTTCCGTAAAGTCATGCCTGGATGGGGACTGAGCCACCAGCCTGACACCCAGAAGGCCGAGAAGCCA
TCTCGGTCTTGTGGAAGGTGGAGACATCGCTTGTGTTCTGGTGTCAATCAGGGGGCTGGATGGGGCAAGAATG
GGGGACAAGGGTGGCTTTGTAAATAGCAGCAAATCCCTGCAACTAATTTATTACTTTTTTTTTTCTTTTTTTTTT
TTTTTTTGAGACAGAGTCTCACTCTGTTGCCCGGCTGGAGTGCAGCGGCGTGATCTCAGCTCACTGCAACCTCC
GCCTCCCAAGTTCAAGCGATTGCTCTGCCTCAGCTTCCCAAGTGGCTGGGATTACAGGCGCCCACTATGCCC
AGCTAATTTTTTGTATTTTTAGTACAGACGGGGTTTCACCATGTTGGTCAAGGCTGGTCTCGAACTCCTGACCTCA
TGATTTGCCTGCCTTTGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGGGCCCAGCCTAATTTATTACT
TTTTATAAGCGATAGCCGTACTGAGCCGCCCCCTGAAGGCGGCTGCCAGGTCTTGCCCCAGGCACCTGGGACTCT
GTTTGCAGGCCCTGCCCTCTGGGCTGAGAAGGATGCACCTTGGACAAGTCATCTGTGTTTGTGTTTTCCAGTTTT
TCTGTACTTTTTAAGTGTTTTGTGTTACCTGGTCTCATTTCCCTCCCCACACCTACCCATTTGAGGGGATGGAGT
TGAAGTCACCTGGTCACCTGTACCGGCCAGTTTCGGCTACAACCTGGAGTGTCCGTAAACAATTCCTCTCACCCA
CAAAACAATGTAATCCCAGCGATGGACTGGATTCTGAAGGCCACTTCCCACCATCATAGCTGCCATGCCAGGCA
GTGCCTGCTCTATATATAGAGTCTGCCTCCAATCCTGCTGGCTTCAGCCTGGAGAAGGGATATGGGAGCTGGAGC
TTTGATGGATGAATAGGTGTTACCGGATCTGGGCAGAGGGGTCATCCGCTCCCCAGGTGGGCACTGATAAAGGA
AGGTACAGGCCTCACCTGGAAGTCCAAGGCAGCCTCCAGAAATGCTCGGCTGTCTCGGGGCACGCTCCAGTATG
CCAGTCTCGGGGATTACGTCCAGCTACTTCCAGAAACACTCAGTGTCCCCCTCCCCCTCAGGCTCTGCCTTGGCCT
GGCCTTGTCCAGTCTACCTTGACAAGATGCCGTGTGTTTGGAGGCCAGCAGAGTAAGCCCTTGGCCGTGATGTG
TCTGAAACACCTGTTAGGGGTTCCTCCATATGTGAGAGCCTCTCTGGGATGAAGTTCAAGCCAGAAAACCCAGT
CGAGGCTCAAGTTTGAATTTGAGCTTCACTGTGTGGCTCTGGGAAAAATGGCTTTCCCACTCTGTGCCTCAGTTTC
CTTGTGTTTACAAGACTAATCCCATTTGACTGTTTATTAAGCACCTACTGTGTGCCAAGCGTTTTTACGTGGCTTC
TCCCTCAGCCAGCCTTGAGAAGGCTGGAGGTGGTGTCACTACCTCCATTTTACAGACAAAGCAGCTGAGACCCCA
GCGAGGGGCGGAGACCTGTCCACGATCACCCAGCAGGAGTCGTGGCAGAACGGAGCATCAGCCAGACCCTGTTG
TGGGCGTTGTATCAAGGGAGCTTGAATGGAGGGTCTGGTGTGAGATACAGCCGACTCCAGCCCCAGCTCATCCC
CCATGATGCTGTGTGACCCACTGGGCACTCTGGTGAGGGAGCTTTCCAGACATCAACAGCCCACTCTGCTTCCCT
TTCTGAGTCCCCTGTCCAGCACTGCCTAGTGTGGAGGGTAGACCAAGGCTGTGCATGATTACCCCCCTCCTTCC
ATCCTGGAGCTGGCAGTGAATAAAAGCCCGTATTTAC

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FIGURE 847

DESSLRRRGLQKELSLPRRGRGCRSGNRKSLVVGTPSPTLSRPLSPLSVPTAGSSPLDSPRNFSAAALNFPFA
RRADGRRWSLASLPSSGYGTNTPSSTLSSSSSSSRERLHQLPFQPTPDELHFLSKHFRSSENVLDEEGGRSPRLRP
RSRSLSPGRATGTFDNEIVMMNHVYRERFPKATAQMEGRLQEFLTAYAPGARLALADGVLGFIHHQIVELARDCL
AKSGENLVTSRYFLEMQEKLERLLQDAHERSDSEEVSFIVQLVRKLLIIISRPARLLECLEFDPEEFYHLLAEAE
GHAREGQGIKTDLPQYIIIGQLGLAKDPLEEMVPLSHLEEEQPPAPESPESRALVGQSRRKPCESDFETIKLISNG
AYGAVYLVHRDTRQRF AIKKINKQNLILRNQIQQVFVERDILTFAENPFVVMFC SFETRRLCMVMEYVEGGD
CATLLKNMGPLPVDMARLYFAETVLALEYLHNYGIVHRDLKPDNLLITSLGHIKLTDFGLSKIGLMSMATNLYEG
HIEKDAREFIDKQVCGTPEYIAPEVIFRQGYGKPDWWAMGVVLYEFLVGCVPFFGDTPEELFGQVVSDEIMWPE
GDEALPADAQDLITRLLRQSPLDRLGTGGTHEVKQHPFFLALDWAGLLRHKAEFVPQLEAEDDTSYFDTRSERYR
HLGSEDDETNDEESSTEIPQFSSCSHRFSKVYSSEFLAVQPTPTFAERSFSEDREEGWERSEVDYGRRLSADIR
LRSWTSSGSSCQSSSSQPERGPSPLLNTISLDTMPKFAFSSSEDEGVGPGPAGPKRPVFI LGEPDPPPAATPVMP
KPSSLSADTAALSHARLRNSIGARHSTPRPLDAGRGRRLGGPRDPAPEKSRASSSGSGGSGGRVPKSASVSA
LSLIITADDGSGGPLMSPLSPRSLSSNPSSRDSSPSRDPSPVCGLRPPIVIHSSGKKYGFSLRAIRVYMGDSDV
YTVHHVVSVEDGSPAQEAGLRAGDLITHINGESVLGLVHMDVVELLLKSGNKISLRTTALENTS IKVGPARKNV
AKGRMARRSKRSRRRETQDRKSLFKKISKQTSVLHTSRSFSSGLHHSLSSES LPSGSPTHSLSPSPTTPCRSPA
PDVPADTTASPPSASPSSSSPASPAAAGHTRPSSLHGLAAKLGP RPKTGRRKSTSSIPPSPLACPPISAPPPRS
PSPLPGHPPAPARSFRLRRGQSADKLG TGERLDGEAGRRTRGPEAELVVMRRLHLSERRDSFKKQEA VQEVSFDE
PQEEATGLPTSVPQIAVEGEEAVPVALGPTGRD .

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FIGURE 848

AGAAGAAGCTGGCCAAGGATATGGGAGCAACCACCATGGACCAGAAGTCTCTCTGGGCAGGTGTAGTGGTCTTGC
TGCTTCTCCAGGGAGGATCTGCCTACAACTGGTTTGCTACTTTACCAACTGGTCCCAGGACCGGCAGGAACCAG
GAAAATTCACCCCTGAGAATATTGACCCCTTCCTATGCTCTCATCTCATCTATTCAATTCGCCAGCATCGAAAACA
ACAAGGTTATCATCAAGGACAAGAGTGAAGTGATGCTCTACCAGACCATCAACAGTCTCAAAACCAAGAATCCCA
AACTGAAAATTCCTTGTCATTGGAGGGTACCTGTTTGTTCCAAAGGGTTCCACCCTATGGTGGATTCTTCTA
CATCACGCTTGGAATTCATTAACCTCCATAATCCTGTTTCTGAGGAACCATAACTTTGATGGACTGGATGTAAGCT
GGATCTACCCAGATCAGAAAGAAAACACTCATTTCCTGCTGATTCATGAGTTAGCAGAAGCCTTTTCAGAAGG
ACTTCACAAAATCCACCAAGGAAAGGCTTCTCTTGACTGCGGGCGTATCTGCAGGGAGGCAAATGATTGATAACA
GCTATCAAGTTGAGAACTGGCAAAGATCTGGATTTTCATCAACCTCCTGTCTTTGACTTCCATGGGTCTTGGG
AAAAGCCCCCTTATCACTGGCCACAACAGCCCTCTGAGCAAGGGGTGGCAGGACAGAGGGCCAAGCTCCTACTACA
ATGTGGAATATGCTGTGGGGTACTGGATACATAAGGGAATGCCATCAGAGAAGGTGGTCATGGGCATCCCCACAT
ATGGGCACTCCTTCACACTGGCCTCTGCAGAAACCACCGTGGGGGCCCTGCCTCTGGCCCTGGAGCTGCTGGAC
CCATCACAGAGTCTTCAGGCTTCCTGGCCTATTATGAGATCTGCCAGTTCCTGAAAGGAGCCAAGATCACGCGCC
TCCAGGATCAGCAGGTTCCTACGCAGTCAAGGGGAACCAGTGGGTGGGCTATGATGATGTGAAGAGTATGGAGA
CCAAGGTTCACTTCTTAAAGAATTTAAACCTGGGAGGAGCCATGATCTGGTCTATTGACATGGATGACTTCACTG
GCAAATCCTGCAACCAGGGCCCTTACCCTCTTGTTCCAAGCAGTCAAGAGAAGCCTTGGCTCCTTGTGAAGGATTA
ACTTACAGAGAAGCAGGCAAGATGACCTTGCTGCCTGGGGCCTGCTCTCTCCCAGGAATTCTCATGTGGGATTCC
CCTTGCCAGGCTGGCCTTTGGATCTCTCTTCCAAGCCTTTCTGACTTCCTCTTAGATCATAGATTGGACCTGGT
TTTGTCTTCTGTCAGCTGTTGACTTGTTGCCCTGAAGTACAATAAAAAAATTCATTTTGCTCCAGTA

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FIGURE 849

MDQKSLWAGVVVLLLLQGGSAYKLVCYFTNWSQDRQEPGKFTPENIDPFLCSHLIYSFASIENNKVIIKDKSEVM
LYQTINSLKTKNPKLKILLSIGGYLFGSKGFHPMVDSSSRLEFINSIILFLRNHNFDGLDVSWIYPDQKENTHF
TVLIHELAEAFQKDFTKSTKERLLLLTAGVSAGRQMIDNSYQVEKLAKDLDFINLLSFDFHGSWEKPLITGHNSPL
SKGWQDRGPSSYYNVEYAVGYWIIHKGMPSEKVVMGIPTYGHSFTLASAETTVGAPASGPGAAGPITESGFLAYY
EICQFLKGAKITRLQDQQVPYAVKGNQWVGYYDDVKSMETKVQFLKNLNLGGAMIWSIDMDDFTGKSCNQGPYPLV
QAVKRSLGSL

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FIGURE 850A

GGAATAACAAAACATGCTCTTAACCATCATCCCCCTCCAGAGAAGCTGGAGGAAATTTCCCCACCAGTGACAGT
CATGAGAAAGACACAAGTTCCCAAAGCAAGTCTGACATCACAAGAGAATCATCTTTTACATCAGCCGACACTGGG
AATTCAGTGTCTGCTTTTCCAAGTTATACAGGCGCAGGGATATCTACTGAAGGAAGCTCGGACTTCTCCTGGGGA
TATGGTGAACCTCGATCAAAATGCCACTGAAAAAGTCCAGACAATGTTTACAGCCATTGATGAACTCTTGATGAG
CAGAAGTTGAGTGTGCATACCAAGAGTCTACAAGAAGAGTGCCAACAGTGGACAGCTAGCTTTTCTCACCTCAGG
ATTCTAGGTAGGCAGATAATCACTCCAAGTGAAGGTTATAGATTGTATCCTAGATCCCCCTTCTGCTGTTTCCGCT
TCATATGAAACAACCTTGTCTCAAGAAAGAGATTCTACTATATTTGGTATAAGGGGAAAGAAGTTACATTTTTCA
TCTTCTTATGCTCATAAAGCATCTTCCATTGCCAAATCCTCCAGCTTTTGTCTATGGAAAGAGATGAGGAAGAC
TCTATAATCGTCTCAGAAGGAATAATTGAGGAATACCTAGCATTTCGATCACATAGATATAGAAGAGGGATTTCAT
GGGAAGAAATCAGAAGCAGCTACAGAGAAACAGAAATTAGGGTATCCTCCCATTGCTCCATTTTACTGCATGAAA
GAAGATGTCCTTGCTTATGTGTTTGACAGTGTATGGTGCAAGGTTGTGAGCTGTATGGAGCAGTTGACACGTAGT
CACTGGGAAGGATTGCTCTGATGATGAGAGTAATGTTGCAGTTACCAGACCCGATTGAGAAAGTTTCTGTGTG
CTGAGTGAACCTACATCCTTTGGTGTACCGCGAGTGCCACAGTCTAAGGTGCTGTACATTACCTCAAATCCGATG
AGTCTCTGTCAAGCAAGCAGACATCAGCCAAATGTGAATGATCTCTTGGTTCATGGAATGCCTCTACAGCCAAGA
AATCTCTCCCTAATGGACAAGCTCCTAGATCTTGATGACAAGCTACTTATGAGGCCTGGGTCCAGTACCATCCTT
TCAACTCGAAATTGGCCAAATCGAGCTGTGGAGTTTGTACATCATCTCTGTGCATACACAGTGCAGTCCACCAGG
AGACGCAATCCACCACCACGAACCTTTTATCCGATCAGCAGCAGGCAATTCATGTGCTGAAACACCAAGATCTGTG
GAAGAAATCCTCAGAGGAGCCCGAGTCCAGTGGCAGCCGACTCGCTCTCCTCTCCCTCACCAGCGCCCTGAGT
CGAAATAATCTGCTACCACCTATTGGCACAGCTGAAGTGAACATGTGAGCACTGTGGGGCCACAAAGACAGATG
AAACCCCATGGCGACTCTAGTCGAGCTCAAAGTGCAGGTGGTGAACCTAATATCAGCAGCCACAAGAAAGG
CTCCTTTTGGCCGACTTTTTTCCCCAGGCCCAACACAACCTCAATCATTTTGGTGGATACACAGTATCGTCGCTCA
TGTGCAGTTGAGTATCCTCATCAGGCCCGACCTGGCAGGGGATCTGCAGGTCTCAGTTACATGGGTCTACAAAA
TCTCAAAGCGGAGGCAGACCAGTCTCTCGAACCAGGCAGGGACCATTAAGGCAAATGAGAAGAATCTATCAGGCTG
CAGGAAACACGAGATTTTATGAAGCAGTATTCAGTCATCAAGTGATGCAGAGCTTGTATAGAAGATCGACTAGAA
ATCATCTTCATGAAGAGTGATTTTGGCACAAGTGACCGAAGAACAACACCATAGCAGCCAAAAATGACATGAG
TGTTGTTTCTATCTCCAGTTACTGTCTCTTTTTCAGCAGAAATTAACCTATCCCATTTGGAAAGGCAAGTTTGTACCC
AAAGATGCAACAGTGAATAATACCCAAATCACTGCTCATGTTATCTCTTAACAATGATCAGTTCAATCATATAGG
ATTTGATGAGCTCACACATACAAAAAGCAGCAAAATCATCAGTGACAATATCACTGGCTTCAGAATACTTCAGC
CTGTGTTTCAATTTCTGGAGAGTTGTACTCAGTTTTAAGTCATTTTGTGTTGAAAACTGACCTCATCAATAGAT
GTCATTCTTAAACTCTCTTTAGATGTCCTACCCTATCAGCAGATTAAAAATGGAAGGGGTGTGTAATAAAAAACA
TAAATGTTAAGCATTAGTATAAAGTAACTTCTGTAATAAATTATATCGCATATTTTTTTCAGATAGGACAGCTCAA
CCTTACGATGCCTACCTGATGCCAGGTGATGCTTATTTTCTTCTTAAAGTAGGTTACTGGTCATATCTTTTTTCC
AAATATTAAATGCACCTTGCCAGATATTCTCCTGCAGCTCTAAGGAAAGGAAATCAATTTAAAAATAATTTGTAG
AATCTACTATTGAGCCACCAAAGTATAATTCCCTAAAAGTTTAAAGAAACCTGGCAATTAATTCAGCATAAACAT
ATCCTATAAACAGCAGGAGAGGTTGAGCTTTCTGATTTTACTGTGGACCTTTTCTAAGGGCATTTCATGAATGCA
GCAACAGTTTTTAACTATGGCTTACATTTATTTTAAATTTTCACTAAATACAAATCTTGATTGTGATGCCAGTTTTA
GATCTTATTAATTTTTCAGAATGGATAAATTCAAATAATCATAAATTACGGTAACCTTTTATTATACCAAGGTGTT
CTAATGCCATCATATGAAGACAGATGCTTCAAACAACCTGCATTAAATTATATTTTAAATAAAATTAATCTAT
TTTTAACCTATTTGTAGTCACAAACCGAAAACGTGTGCTCTTTACCTTAGAGCTAAAGGCTTACTTTATGCATAC
GGTATATTTAATAGTCTACAAATCAAAGATTTAAACAGTCCCTTAAAAATTCCATATATTTTCATACCAACTCAT
CTACATAGAAATGAAAATCTCTATTGTTCTCACAACCATTAACATGAGTTCACTATAACAACCTGGATCAATATG
GCTTGCCTTTTCAAAGTTAAAGAATCAGAAAGGGGCTGTGAAGAAGTCATTTAGCCCAATTCCCTCACCCTGTGTG
TTTTCCCTCAAAGCCAGTGCAATTTTTTTTTTAAACAAAAAACTGGACATGTTTAAATACATACAGTTTGACAAATT
TGGATTTTCACTCTTTGTTTTGATGTAGTAACTCTTTTATAAAAGGGAACAGATTTCAGACAAGCTCAGTGGCCCAA
CTGAAGACATTTCAGCAATTAATGGCAGGACTTCAGTAATCAGTGGCAGGACTACAACATACATCTCTTCATGCTA
GGGAAACCAGGCTCTCTATTATAAAGCTGACCAGGGCTATTGTTTTCCCTTTTCTCTCATCTTAAACACCATTC
ATATTTTTCTTAGGTACATTTTAGTGGGATCATTTACAAAGCCCCCAGAACTTAATCATCATGTTTTACCTTTT
TTATTGAATTATATACACCTCTTACAAAAATGCTTGAAGTAATTTAACACCTGTACATCAGTACAAAACCTGGCT

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FIGURE 850B

GAGTAAATGAAGAGAGGATCTATTCAAGATCATTAAAGACCAAATGTAACTGGGAAGTATGTGGAAGATAGCTG
TCCAGCAAGTGTCTGGAAGGTGTTCTAGCTGGGTAGAGAGCCTATTCTAACAGACACGCACATCGCAGAAAGCAG
CATGAACAGAACCACATCCTAGATAAGAGTTCTGTGTACAGAAGATCCATGGAGGCAAGTGCTGTCAGGAAGGAC
ACTGCCCTCCCTCCACCCTCCCAAATGTCACCACCAAGTTCCTTCAGGTGAGACCTCACACAATGTCAAGTGCTTT
CTAGGAAATACTAAGATCAGGTGAGAGATTCTGCTTGGTCTAGTCAATCTGAAAAATTTCAGGCTGGAAAGACAC
CTTTTCTCAAGAGCTGAATTGACTTTTGCCTTCAAATCCTGCCTGCACCTTGCCTACGATGGCATCAATTTACAC
CTAAGGACCTTTGAAGAGAAAAATTCCATTATTTCTTTTCTTTCTTGAGAGCAGATTTTTTCCCTCCTCCTTTGG
AAGATTTGCAGTACTTTGCTTCCATCTGAGCCAGAAAATTGTCCATTTCTTTTGGCGATCCTTTTGTCTGCTCT
GTTTGAGAAGTTAAACACAAGCTTTCACAACATTATCCATAGACAGAAAGTACCTAGTGTTGCCAGGGGCTGG
AAAAGTGGAATAACTACTAATGGGTATGGAGTTTTTTTTGGAATGGTGAAAATGTCCTACAATTGGTGTTAATAAT
TGTAATACTTTGTAAATACACTTAAACCACCAAATTGTACACTTTAAAAGGACAAATAGAAGGTATGCGGTTAT
GTCTTAAAAAGAAAACAAAATACAACATTCCAAAGAAAATATTAGCAGTAGGAATCAGATCATTAAAGATGTG
GCAACAAACTGCCAAGTTTACCTGAATGGCTGCCTTCAGGCTATCCACGCCTTCATCAAGCCCCAACTCCTTTCT
GCTCATTTCTGCTTCTTTGGCCTCTTCCTGAGCCTGAAACAGGAACCTCACATGAGACTCAGGGCCACCAGGAAAT
GCTTAAAAATACATACTCTTTCCCAAAGCAAATCTATAATTCTGTTTCAATTTTATGAATATATGAATAGACAAA
ATGAATCGAATTACATAACTATGTCATTCAATTAATGGCAACAATGCTGACAGCAAGCAGTAGATCCTCTGATTC
CAATTACCATTTGTTTTTTACCCAATTCTATTTGCTAGAGGTAGTAAGTACTCTGGCACTCATAAATCACATGAT
GATAAAAAGGAACATGAGGCCGGGTATGGTGGCTCACAACCTGTAATCCCCATACCTTGGGAGGCCAAGGTGGGAG
GATCACTTGAACCTCAGGAGTTCAAGACCTGCCTGGGTAACATAGTGAGACCTCAGTTCTATAAAAAAGAAAAGAA
ATGAGCCTGGTGTGGTGGCATGTGCTTGTAGTCCCAGCTACTAGGGAGGCTGAGGTGGGAAGATGGCTTCAGTCT
GAGAGTTCAGGCTGCAATAAGCTGTGATCATGCCTCTGCACTCCAGCCTGGGTGATGGAGATGCCATCTCTTAGA
AAAAAGAG

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FIGURE 851

GITKHALNHPPPEKLEEISPTSDSHEKDTSSQSKSDITRESSFTSADTGNLSLAFPSYTGAGISTEGSSDFSWG
YGELDQNA TEKVQTMFTAIDELLYEQKLSVHTKSLQEECQQTASFPHLRILGRQIITPSEGYRLYPRSPSAVSA
SYETTLSQERDSTIFGIRGKKLHFSSSYAHKASSIAKSSSFCSMERDEEDSIIVSEGIIEEYLAFDHIDIEEGFH
GKKSEAATEKQKLGYPPIAPFYCMKEDVLAYVFDVWCKVVSCEQLTRSHWEGFASDDENAVTRPDSESSCV
LSELHPLVLPRVPQSKVLYITSNPMSLCQASRHQPNVNDLLVHGMPLOPRNLSLMDKLLDLDKLLMRPGSSTIL
STRNWPNRAVEFSTSSLSYTVQSTRRRNPPPRTLHPISTSHSCAETPRSVEEILRGARVPVAPDSLSSPSPTPLS
RNNLLPPIGTAEVEHVSTVGPQRQMKPHGDSSRAQSAVVDEPNYQQPQERLLLPDFFPRPNTTQSFLDTQYRRS
CAVEYPHQARPGRGSAGPQLHGSTKSQSGRPVSRTRQGP

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FIGURE 852A

GGAATAACAAAACATGCTCTTAACCATCATCCCCCTCCAGAGAAGCTGGAGGAAATTTCCCCACCAGTGACAGT
CATGAGAAAGACACAAGTTCCCAAAGCAAGTCTGACATCACAAGAGAATCATCTTTTACATCAGCCGACACTGGG
AATTCAGTGTCTGCTTTTCCAAGTTATACAGGCGCAGGGATATCTACTGAAGGAAGCTCGGACTTCTCCTGGGGA
TATGGTGAACCTCGATCAAAATGCCACTGAAAAAGTCCAGACAATGTTTACAGCCATTGATGAACTCTTGTATGAG
CAGAAGTTGAGTGTGCATACCAAGAGTCTACAAGAAGAGTGCCAACAGTGGACAGCTAGCTTTTCTCACCTCAGG
ATTCTAGGTAGGCAGATAATCACTCCAAGTGAAGGTTATAGATTGTATCCTAGATCCCCCTTCTGCTGTTTCCGCT
TCATATGAAACAACCTTGTCTCAAGAAAGAGATTCTACTATATTTGGTATAAGGGGAAAGAAGTTACATTTTTCA
TCTTCTTATGCTCATAAAGCATCTTCCATTGCCAAATCCTCCAGCTTTTGTCTATGGAAAGAGATGAGGAAGAC
TCTATAATCGTCTCAGAAGGAATAATTGAGGAATACCTAGCATTCGATCACATAGATATAGAAGAGGGATTTCAT
GGGAAGAAATCAGAAGCAGCTACAGAGAAACAGAAATTAGGGTATCCTCCATTGCTCCATTTTACTGCATGAAA
GAAGATGTCCTTGCTTATGTGTTTGACAGTGTATGGTGCAGGTTGTGAGCTGTATGGAGCAGTTGACACGTAGT
CACTGGGAAGGATTTGCCTCTGATGATGAGAGTAATGTTGCAGTTACCAGACCCGATTGAGAAAGTTTCTGTGTG
CTGAGTGAACCTACATCCTTTGGTGTACCGCGAGTGCCACAGTCTAAGGTGCTGTACATTACCTCAAATCCGATG
AGTCTCTGTCAAGCAAGCAGACATCAGCCAAATGTGAATGATCTCTTGGTTTCAATGGAATGCCTCTACAGCCAAGA
AATCTCTCCCTAATGGACAAGCTCCTAGATCTTGTATGACAAGCTACTTATGAGGCCTGGGTCCAGTACCATCCTT
TCAACTCGAAATTGGCCAAATCGAGCTGTGGAGTTTAGTACATCATCTCTGTGCATACACAGTGCAGTCCACCAGG
AGACGCAATCCACCACCACGAACCTCTTCATCCGATCAGCAGCAGCCATTTCATGTGCTGAAACACCAAGATCTGTG
GAAGAAATCCTCAGAGGAGCCCGAGTCCCAGTGGCACCCGACTCGCTCTCCTCTCCCTCACCGACGCCCCCTGAGT
CGAAATAATCTGCTACCACCTATTGGCACAGCTGAAGTGGAACATGTGAGCACTGTGGGGCCACAAAGACAGATG
AAACCCCATGGCGACTCTAGTCGAGCTCAAAGTGCGGTGGTGGATGAACCTAACTATCAGCAGCCACAAGAAAGG
CTCCTTTTGCCCGACTTTTTTCCCCAGGCCCAACACAACCTCAATCATTTTTGCTGGATACACAGTATCGTCGCTCA
TGTGCAGTTGAGTATCCTCATCAGGCCCCGACCTGGCAGGGGATCTGCAGGTCCTCAGTTACATGGGTCTACAAAA
TCTCAAAGCGGAGGCAGACCAGTCTCTCGAACCAGGCAGGGACCATAAGGCAAATGAGAAGAATCTATCAGGCTG
CAGGAAACACGAGATTTTCATGAAGCAGTATTCAGTCATCAAGTGATGCAGAGCTTGTATAGAAGATCGACTAGAA
ATCATCTTCATGAAGAGTGATTTTGGCACAAAGTGACCGAAGAACAAAAACCATAGCAGCCAAAAATGACATGAG
TGTTGTTTCTATCTCCAGTTACTGTCTCTTTTCAGCAGAAATTAACCTATCCCATTGGAAAGGCAAGTTTGTACCC
AAAGATGCAACAGTGAATAATACCCAAATCACTGCTCATGTTATCTCTTAACAATGATCAGTTCAATCATATAGG
ATTTGATGAGCTCACACATACAAAAAGCAGCAAATCATCAGTGACAATATCACTGGCTTCAGAATACTTCAGC
CTGTGTTTCAATTTCTGGAGAGTTGTACTCAGTTTTAAGTCATTTTGTCTGTTGAAAATCTGACCTCATCAATAGAT
GTCATTCTTAAACTCTCTTTAGATGTCCTACCCTATCAGCAGATTAAAAATGGAAGGGGTGTGTAATAAATAACA
TAAATGTTAAGCATTAGTATAAAGTAACTTCTGTAATAAATTATATCGCATATTTTTTTCAGATAGGACAGCTCAA
CCTTACGATGCCACCTGATGCCAGGTGATGCTTATTTTTCTTCTTAAAGTAGGTTACTGGTCATATCTTTTTTCC
AAATATTAAATGCACCTTGCCAGATATTCTCCTGCAGCTCTAAGGAAAGGAAATCAATTTAAAAATAATTTGTAG
AATCTACTATTGAGCCACCAAAGTATAATTCCCTAAAAGTTTAAAGAAACCCTGGCAATTAATTCAGCATAAACAT
ATCCTATAAACAGCAGGAGAGGTTTCACTTTTCTGATTTTACTGTGGACCTTTTCTTAAGGGCATTTCATGAATGCA
GCAACAGTTTTTAACTATGGCTTACATTTATTTTTAAATTTCACTAAATACAAATCTTGATTGTCATGCCAGTTTTA
GATCTTATTAATTTTTCAGAAATGGATAAATTCAAATAATCATAAATTACGGTAACTTTTTATTATACCAAGGTGTT
CTAATGCCATCATATGAAGACAGATGCTTCAAACAACCTGCATTAAATTATATTTTTTAATAAAATTAATAATCTAT
TTTTAACCTATTGTAGTCACAAACCGAAAACGTGTCGTCTTTACCTTAGAGCTAAAGGCTTACTTTATGCATAC
GGTATATTTAATAGTCTACAAATCAAAGATTTAAACAGTCCCTTAAAAATTCATATATTTTTCATACCAACTCAT
CTACATAGAAATGAAAATCTCTATTGTTCTCACAACCATTAACATGAGTTCACTATAACAACCTGGATCAATATG
GCTTGCCCTTCAAAGTTAAAGAATCAGAAAGGGGCTGTAAAGAGTCATTTAGCCCAATTCCTCACCTGTGTG
TTTTCCCTCAAAGCCAGTGCAATTTTTTTTTTAAACAAAAAACTGGACATGTTTAAATACATACAGTTTGACAAATT
TGGATTTCACTCTTTGTTTTGATGTAGTAACTCTTTTATAAAAGGGAACAGATTCAGACAAGCTCAGTGGCCCAA
CTGAAGACATTGAGCAATTAATGGCAGGACTTCAGTAATCAGTGGCAGGACTACAACATACATCTCTTCATGCTA
GGGAAACCAGGCTCTCTATTATAAAGCTGACCAGGGCTATTGTTTTCCCTTTTCTCTCATCCTAAACACCATTC
ATATTTTTCTAGGTCACATTTTAGTGGGATCATTTACAAAGCCCCCAGAACTTAATCATCATGTTTTACCTTTT
TTATTGAATTATATACACCTCTTACAAAATGCTTGAAGTAATTTAACACCTGTACATCAGTACAAAACCTGGCT

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FIGURE 852B

GAGTAAAATGAAGAGAGGATCTATTCAAGATCATTAAAGACCAAATGTAACTGGGAAGTATGTGGAAGATAGCTG
TCCAGCAAGTGTCTGGAAGGTGTTCTAGCTGGGTAGAGAGCCTATTCTAACAGACACGCACATCGCAGAAAGCAG
CATGAACAGAACCACATCCTAGATAAGAGTTCTGTGTACAGAAGATCCATGGAGGCAAGTGCTGTCAGGAAGGAC
ACTGCCTCCCTCCACCCTCCCAAATGTCACCACCAAGTTCCTTCAGGTGAGACCTCACACAATGTCAAGTGCTTT
CTAGGAAATACTAAGATCAGGTTGAGAGATTCTGCTTGGTCTAGTCAATCTGAAAAATTCAGGCTGGAAAGACAC
CTTTTCTCAAGAGCTGAATTGACTTTTGCCTTCAAATCCTGCCTGCACCTTGCCTACGATGGCATCAATTTACAC
CTAAGGACCTTTGAAGAGAAAAATTCCATTATTTCTTTCTTTCTTGAGAGCAGATTTTTTCCCTCCTCCTTTGG
AAGATTTGCAGTACTTTGCTTCCATCTGAGCCAGAAAAATTGTCCATTTCTTTTGGCGATCCTTTTGTCTGCTCT
GTTTGAGAAGTTAAAACACAAGCTTTCACAACATTATCCATAGACAGAAAGTACCTAGTGGTTGCCAGGGGCTGG
AAAAGTGGATAACTACTAATGGGTATGGAGTTTTTTTGGGAATGGTGAAAATGTCCTACAATTGGTGTTAATAAT
TGTAAAACTTTGTAAATACACTTAAAACCACCAAATTGTACACTTTAAAAGGACAAATAGAAGGTATGCGGTTAT
GTCTTAAAAGAAGAAAACAAAATACAACATTCCAAAGAAAAATATTAGCAGTAGGAATCAGATCATTAAAGATGTG
GCAACAACTGCCAAGTTTACCTGAATGGCTGCCTTCAGGCTATCCACGCCTTCATCAAGCCCCAACTCCTTTCT
GCTCATTCTGCTTCTTTGGCCTCTTCCTGAGCCTGAAACAGGAACTCACATGAGACTCAGGGCCACCAGGAAAT
GCTTAAAATACATACTCTTTCCCAAAGCAAATCTATAATTCTGTTTCAATTTTATGAATATATGAATAGACAAA
ATGAATCGAATTACATAACTATGTCATTCAATTAATGGCAACAATGCTGACAGCAAGCAGTAGATCCTCTGATT
CAATTACCATTTGTTTTTTACCCAATTCTATTTGCTAGAGGTAGTAAGTACTCTGGCACTCATAAATCACATGAT
GATAAAAAGGAACATGAGGCCGGGTATGGTGGCTCACAACCTGTAATCCCACATCCTTGGGAGGCCAAGGTGGGAG
GATCACTTGAACCTCAGGAGTTCAAGACCTGCCTGGGTAAACATAGTGAGACCTCAGTTCTATAAAAAAGAAAAGAA
ATGAGCCTGGTGTGGTGGCATGTGCTTGTAGTCCCAGCTACTAGGGAGGCTGAGGTGGGAAGATGGCTTCAGTCT
GAGAGTTCAGGCTGCAATAAGCTGTGATCATGCCTCTGCACTCCAGCCTGGGTGATGGAGATGCCATCTCTTAGA
AAAAAGAG

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FIGURE 853A

GCGGCGGTGCGGCCAGGCTGCAGCTGAGCGCTCTGCGCGGCGCAGCCGGGTCTCCCGCGTGTAACACGCCGTGA
CAGGTGCAGAGTCCGGGCTGAGGACCCACCTGCAGCCGCCGCCGCGATGCCACCATGCGGAGGACCGTGTCCGA
GATCCGCTCGCGCGCCGAAGGTTATGAGAAGACAGATGATGTTTCAGAGAAGACCTCACTGGCTGACCAGGAGGA
AGTAAGGACTATTTTCATCAACCAGCCCCAGCTGACAAAATTCTGCAATAACCATGTCAGCACTGCAAAAATACAA
CATAATCACATTTCCTTCCAAGATTTCTCTACTCTCAGTTTCAAGAGCTGCTAATTCATTTTTTCTCTTTATTGTC
ACTGCTGCAGCAAATACCTGATGTGTACCAACAGGTGCTTATACAACACTGGTTTCTCTTTATTTATTGTC
TGTGGCAGCTATCAAAGAGATAATAGAAGATATTAACGACATAAAGCTGATAATGCAGTGAACAAGAAACAAAC
GCAAGTTTTGAGAAATGGTGTCTGGGAAATTGTCCACTGGGAAAAGGTGGCAGTAGGGGAGATAGTGAAAGTGAC
CAATGGGGAACATCTCCAGCAGATCTCATCAGTCTGTCTCAAGTGAGCCCCAAGCCATGTGCTACATTGAAAC
ATCCAACCTTAGATGGTGAAACAACTTGAAAATTAGACAGGGCTTACCAGCAACATCAGATATCAAAGACGTTGA
CAGTTTGATGAGGATTTCTGGCAGAATTGAGTGTGAAAGTCCAAACAGACATCTCTACGATTTTGTGGAACAT
AAGGCTTGATGGACATGGCACCCTTCCACTGGGAGCAGATCAGATTCTTCTTCGAGGAGCTCAGTTGAGAAATAC
ACAGTGGGTTTCATGGAATAGTTGTCTACACTGGACATGACACCAAGCTGATGCAGAATTCAACAAGTCCACCACT
TAAGCTCTCAAATGTGGAACGGATTACAAATGTACAAATTTTGATTTTATTTTGTATCTTAATTGCCATGTCTCT
TGTCTGTTCTGTGGGCTCAGCCATTTGGAATCGAAGGCATTCTGGAAAAGACTGGTATCTCAATCTAAACTATGG
TGGCGCTAGTAATTTTGACTGAATTTCTTGACCTTCATCATCTTTTCAACAATCTCATTCTATCAGCTTATT
GGTTACATTAGAAGTTGTGAAATTTACCCAGGCATACTTCATAAATTGGGATCTTGACATGCACTATGAACCCAC
AGACACTGCTGCTATGGCTCGAACATCTAATCTGAATGAGGAACCTTGGCCAGGTTAAATACATATTTTCTGACAA
AACTGGTACTCTGACATGCAATGTAATGCAGTTTAAAGAGTGACCATAGCGGGAGTTGCTTATGGCCATGTCCC
TGAACCTGAGGATTATGGCTGCTCTCTGATGAATGGCAGAACTCACAGTTTGGAGATGAAAAAACATTTAGTGA
TTCATCATTGCTGGAAAATCTCCAAAATAATCATCCAACCTGCACCTATAATATATGAATTTCTTACAATGATGGC
AGTCTGTACACAGCAGTGCCAGAGCGAGAAGGTGACAAGATTATTTATCAAGCAGCATCTCCAGATGAGGGAGC
ATTGGTCAGAGCAGCCAAGCAATTGAATTTGTTTTCTCTGGAAGAACACCCGACTCGGTGATTATAGATTCACT
GGGGCAGGAAGAAAGATATGAATTGCTCAATGTCTTGGAGTTTACCAGTGCTAGGAAAAGAATGTCAGTGATTGT
TCGCACTCCATCTGGAAGTTACGACTCTACTGCAAAGGAGCTGACACTGTAATTTATGATCGACTGGCAGAGAC
GTCAAAATACAAAGAAATTACCCTAAAACATTTAGAGCAGTTTGCTACAGAAGGGTTAAGAACTTTATGTTTTGC
TGTGGCTGAGATTTTCAAGAGAGCGACTTTCAGGAGTGGCGAGCAGTCTATCAGCGAGCATCTACATCTGTGCAGAA
CAGGCTACTCAAACCTCGAAGAGAGTTATGAGTTGATTGAAAAGAATCTTCAGCTACTTGGAGCAACAGCCATTGA
GGATAAATTACAAGATCAAGTGCCTGAAACCATAGAAACGCTAATGAAAGCAGACATCAAAATCTGGATCCTTAC
AGGGGACAAGCAAGAAACTGCCATTAAACATCGGACACTCCTGCAAACCTGTTGAAGAAGAACATGGGAATGATTGT
TATAAATGAAGGCTCTCTTGATGGAACAAGGGAAACTCTCAGTCGTCAGTGTACTACCCTTGGTGATGCTCTCCG
GAAAGAGAATGATTTTGCTCTTATAATTGATGGGAAAACCTCAAATATGCCTTAACCTTTGGAGTACGACAGTA
TTTCTGGACTTAGCTTTGTATGCAAAAGCTGTCAATTTGCTGTGCGGGTTTCTCCTCTTCAAAAATCTGAAGTTGT
TGAGATGGTTAAGAAACAAGTCAAAGTCGTAACGCTTGCAATCGGTGATGGAGCAAATGATGTCAGCATGATACA
GACAGCGCACGTTGGTGTGGTATCAGTGGCAATGAAGGCCTGCAGGCAGCTAATTCCTCTGACTACTCCATAGC
TCAGTTCAAATATTTGAAGAATTTACTGATGATTGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
ATACTGCTTCTACAAGAATATAGTGCTCTATATTATCGAGATCTGGTTTGCCTTTGTTAATGGCTTTTCTGGACA
GATCCTCTTTGAAAGATGGTGTATAGGTCTCTATAACGTGATGTTTACAGCAATGCCTCCTTTAACTCTTGGAAT
ATTTGAGAGATCATGCAGAAAAGAGAACATGTTGAAGTACCCTGAATTATACAAAACATCTCAGAATGCCCTGGA
CTTCAACACCAAGGTTTTCTGGGTTCAATTGTTTAAATGGCCTCTTCCACTCAGTTATTCTGTTTTGGTTTCCACT
AAAAGCCCTTCACTATGGTACTGCATTTGGAATGGGAAAACCTCGGATTATCTGCTACTGGGAACTTTGTGTA
CACTTTTGTGGTGATAACTGTGTGTTTGAAGCTGGATTGGAGACATCATATTGGACATGGTTTCAAGCCACATAGC
GATATGGGGGAGCATCGCACTCTGGGTGGTGTGTTTGGGAATCTACTCATCTCTGTGGCCTGCCATTCCGATGGC
CCCTGATATGTGAGGAGAGGCAGCCATGTTGTTCAAGTCTGGAGTCTTTTGGATGGGCTTGTATTTCATCCCTGT
GGCATCTCTGCTCCTTGATGTGGTGTACAAGGTTATCAAGAGGACTGCTTTTAAACATTGGTTCGATGAAGTTCA
GGAGCTGGAGGCAAAATCTCAAGACCCAGGAGCAGTTGTACTTGGAAAAGCCTGACCGAGAGGGCGCAACTGCT
CAAGAAGCTCTTTAAGAAGAACCAGTGAACCTGTACCGCTCTGAATCCTTGCAACAAATCTGCTCCATGGGTA
TGCCTTCTCTCAAGATGAAAATGGAATCGTTTACAGTCTGAAGTGATAAGAGCATATGATACCACGAAACAGAG

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FIGURE 853B

GCCCCACGAATGGTGATGGGGAGAGCCTGAAAGGCAGGCTCTGTTACCTCTCTAAGGAGAGCTACCAGGTTGTCA
CCGCAGTCTGCTAACCAATTCCAGTCTGGTCCATGAAGAGGAAAGGTAGATCTGAGCTCATCTCGCTGATGGACA
TTCAGATTCATGTATATTATAGACATAAGCACTGTGCAACTGTACTGTAACACCATCTCTTTTGGATTTTTTTAA
GGTATTTGCTAAGTCTTTGTAAACGGAAATTGAAAATGACCTGGTATCTTGCCAGAGGGCTTTCTTAAACGGAGA
ATAAGTCAGTATTCTTATGCCATTACTGTGGGGCTGTAAGTACTGTCTAGTTTATTGGCTGTACCACAAGGTAAC
CAACCATTAAAAAACTCTAAATGATATTTAGTTAAAGGGACTCTTGGTATCCAGACTTAGATTTTTCAGGATATGCT
GAAACAAACCAGCATTCTTAAGGAACTGACTCACCTTCTGAGCAAAATTTCTAAACAAGCATTGTGTGCCAAAA
TTGCTTGTATAAATGTTTGCCAAAGAGGTTTCAGTAAGTGTTTTTCTAGTTTCAGTAGTCATATGCCCAGAAATGTA
AGAGAAAGTTTACTTCCAGTTCCGCTGTAAGATCTGCATGCCTGACTTTCCAAATGTAAGAGTGATTTACAAAAA
TGAATATTTCAAGGCATTTGCTACTAAAAATCGGTGATGTTGCACCTTTGGCCTTACAAATGCTTCTTTGTTGTTT
GTCGTGTTTTATTTGTTAGAGGACACACGTGTTAATGTGACTCTGTTGTTATGACACTGATTTTTCAAACATGTA
TGTTTCAGGATTTTCTGATGAAGTTTTCATCATCATTTAGATTTTTCTAAAAATCTGGCTAATGCAGTAGATTGAG
TGATGTCATTTTGTCTTAAAGTTTTTCTCTTAAAGAAACATATGCTACGTATTTACGTGGGATTTCCAAAGCTTC
TGTTGCAATATTTGGAATAACATGTCAGATAAATGCATGGGCTTTTGCTCTGTGTTCCAGTTCCCACTAGAGATG
CCTGTGCTTGTGTAGCACACCCAGTGTTATGGTGACTGCCCCCTATACTGAAGACTGAAAATTATTTTCACAGTT
CACTCATCAAATAGTTCCCAAAATTCGTCCATGCTGCTTATTGGGACAAATAGGTAGTACATTTTCCCCATTTA
AAAAATGCGGATTTTACTCAGGCCGGTAACTTTACAGTCAGAGGACACGTTTCATCATGAGTAGCTTTTGTTAGTA
TGTTTTAAATGTATCTTCAGTTCAATTATTTTCAGCATTTACAAGACATCTGAAAATGGCTATTTTGCTACCAA
CAGTAAATGAAGGGCTGTTTAAAAACCACAACCAGTTTCTACACTATTTTTTAAATAATACTTTTCAATTTGAAA
AAAAGGAATTAGTTTTTCAGATACACTTCAGAGATTGAAGCAAATATTTGCCTTTTACTCAAAAGCCTGCTTGCC
TTTACATGGACTTACCAGCAAAATAGGTAGAACTTTCTCTTTTAAAAAAGTCAACTAGAAATTGAGAAGAGGTGA
TTTTTTTTTCAGATCGCTTCTCGAGTTTAATATTTTCACATCTTTTACCCTTTTTCTCAATCTAGATTTAAAT
TAGGATATATGTCATTTCTTGTCTGTATTTGTAGCTCCTTAGTTACCAGTATGCCTCTCCATTTTCTACAAATA
AGAGGTTATAACACATATACATAATTCTAACCTTAAGGGAACACACGTTTACATACTTTACTTCCCAAGCCCTTC
CTGTTTGGGGTACAGATTGAGAGAGTCATGAATCAACACATCTAGCAAGACCACAGGTGTAAGAGTCTAAGATCG
TCTTCAAAATCTGAAGTCCAGTCTTTACCTGTCCAGTGAATGAATATTCAGAGCAGCTTTTCTGGGGCTTCCC
AGTGGTGATAGCTGAGGTCAAACCACAAAAATAAGAAAGCAAGAGTGAAATGCACCCCTCCAGAGAAAACATTT
GTAGTGTTTAATTCTGTTAATAGAGAAGAGCTGCTTCTGTTTGGGCTCACTTCATCAGTGGCACCCCTTCTGCAGA
ATTTTAATATAAAAAACATTATGGATATAATAGAAGTGGATTTTCTGACTTAAAAATGTAAGTTTATTTAATCT
TGAAACGTGGATTGTTTCTGTGGAGCTCTTAAACATGAGAAGAATACTTACGGTTGATAATGTGTAACATGATCT
GAAATGTGACTAATTTGAGCCTCTTTGTCCCATCGTCCTGTTTTTGAATTATTGACATTGTCAGTCTCTTTGCTT
CCTGGGTGAGACTTGGGGTTTGGGGACAGGGAATGACCTTCTTGGTGAAACTTAAAAATATAACATTGCAATTGC
AGTGACTTTACAGTGTTAAATTAGAGAAAATAGTCTGATTTTTTAAACCTTCTTAACTGGAAAAAGTCACATG
GTTTTACCAGGATTGAAATAAACAGTCAATGTGACTTTTAAACATGTGTTTTTTTGAATAAAGGGCACGTACTCT
TCAATTA AAAAGTTCCCTATAGGGACTCTGGCAAATGCTAACACAGTTGCTTTACAATGTTTACAATTCAGACAA
TACGACTTATAATAGAAAATCCTCATTCATTTAGCATTGAAAAGCTGGAAGTTGCTTCTTAAATGTTGAATAGTA
TACAGTGTGATTGAGCATGGACTTTCTAAATGTTTTATATATACATATAAAAAATATATTGGTGTCTCACACCCAG
AAAGATGTTATATTGTAGATATTATTAGGAAAACAGTGTTTCTCAGGAACGTTGTAAATTTTAAATGATATATGT
ACTTCCCGTCTCCACCTCCACTCTGTGCTCTAATGTGAGACTGCTTCAGCAGTGTTGCTAAGTTAATGGAAAA
CTTTTTCTAATCAAGTCAGGTGAATGTGTATTCTGCTAAATAATGTTAGCCATTTACATGAATTGTATGGTCATT
AAATGGAATCAGTGATTCTCTTTAATTTCCAGAGGGGAAATGAATTATGGAAATCAGTCAGCATTCTGATCATT
AAATTTTATACTTTAATTTTGCCGTTTCAGCATTCTAAATATCCAATGTGAAAGTCACATGATAATTTGTTTTGCA
TTGCGTGCCTGTACAACACTTACAACCTTGTCATTTAAATGTTTTTCTCGGGAAATGAATGCTAGTCAGAAAGTA
ATAGATTGTATTATTCATAGTTTTTAAATTTATGACAATGTCATAATTACTACAAAGCTAAATAATCGTGTATTAT
TTTGTGCAGTTGCCCTTTGATAGTTTCTGGTTTTTAAACCTATTAAGTGATAATCTTACAAATAGTCATCTACA
AAATTTATGGAGAAAGTGCCAGCCCATTCACATCACATGGACCAGGAATTCTTTTGTAATGACTTAAGGTAAC
ATCATGCAGTTCAGTGCTAATAAATGCTTTTTTAAATGATGAGCATTCTTATAATGACTCGTAAGATACCATAGTC
TGATTTTTCTCACATTAATAAATACTGAAGTCACTTGTGTAACGTAGTTATACTTTGCTGCATTTAATTAACCTT

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FIGURE 853C

CAACAGCTATTAAAGTGGAATGTAAGTTAAATTTTGAAGGAAAGGAAATAAATGTTTTCCATATTTTCGTCTTGAT
TTACTTTCTGTATGAGAACAGCTGTGTTTTTGATAGGTTTATGGTTTGCATGAGTTCATATTTAAAGTGATCCAG
GCCAATGCATGGCTATTGCTGTAAATCTTGATGTTTATTTCTGCCTTGTAAGTTCTATCACGGCCTACCTGGAA
TTTAAATTCAGTAGACAAATTAATTGGTCCTCTGCACAACCTTTTTTAATAAGTAGATTATTTTACAAAGAAATT
TGAACAAATTTAATTGAATCTTTTGTTTAGCTTGCCTCTAAGAACCTTTTCTTAATAAAGCTCCCAAACTTCTCA
GCAAATAAATCTCCCTTAAGTAGGAAAACCTAGATTTTCATATTTGCTTACTTTGAATTAACAGCAACTTTCCACAG
GTAAATCTGTTCTTGCAAAGATGTGAGCAGAATAGTTAAAAATAATTTTTATGTTTCATGGTTCTAAATGGAA
GCCATAAATGCAGTAAATACTATCTGTTGTTTAACTACTTTAATCGTCATTTTTTACATTTTCAAGTTTATTAGG
TTAAGAAAAACAGGGCAGCCTTGGAAGGCAGCTACTACAGAAAACCTGCAGTTTTGCGTTAAAGATAAAGTAGTAT
TTTCAGCTCCCTGAAAAACCATTCTGCTGAAACTGCTGTAGAAATTGTGAAGCTGCATGAGTGGAGAGTATTGA
ATCIGTGGTTATAGTAGTTTTCTCAGGTTTGTATCTTGATGTTTGATGCACTGTGTTTTATAGTTATTAAAT
TGAGTAATATTATTTCTATGCAGTGTTATGTGTCATTGGCCTTTTGTGAATGTGCATGTTTTAAACTGCAATTT
TAAACATTTTGTCTCTAATTGTTATTAAAAATGAAATAAAGCTTTACCATTACTTAAAAAAA

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FIGURE 854

MP TMRRTVSEIRSRAEGYEKTD DDVSEKTS LADQEEVRTIFINQPQLTKFCNNHVSTAKYNIITFLPRFLYSQFRR
AANSFFLFIALLOQIPDVSP TGRYTTLVPLLFILAVAAIKEI IEDIKRHKADNAV NKKQTQVLRNGAWEIVHWEK
VAVGEIVKVTNGEHL PADLISLSSSEPQAMCYIETS NLDGETNLKIRQGLPATSDIKDVDSL MRISGRIECESPN
RHLYDFVGNIRLDG HGTVP LGADQILLRGAQLRNTQWVHGIVVYTGHDTKLMQNSTSPPLKLSNVERITNVQILI
LFCILIAMSLVCSVGS AIWNRHSGKDWYLN LNYGGASNFG LNFLTFIILFNNLIPISLLVTLEVVKFTQAYFIN
WDLDMHYEPTDTAAMARTSNLNEELGQVKYIFSDKTGTLTCNVMQFKKCTIAGVAYGHVPEPEDYGCSPDEWQNS
QFGDEKTFSDSS LLENLQNNHPTAPIIYEFLTMMAVCHTAVPEREGDKIIYQAASPDEGALVRAAKQLNFVFTGR
TPDSVIIDSLGQEERYELLNVLEFTSARKRMSVIVRTPSGKLRLYCKGADTVIYDRLAETSKYKEITLKHLEQFA
TEGLRTL CFVAEISESDFQEWRAVYQRASTSVQNRLKLEESYELIEKNLQLLGATAIEDKLQDQVPETIETLM
KADIKIWILTGDKQETAINIGH SCKLLKKNMGMI VINEGSLDGTRETL SRHCTTLGDALRKENDFALIIDGKTLK
YALTFGVRQYFLDLALSCKAVICCRVSPLQKSEVVEMVKKQVKVVT LAIGDGANDVSMIQT AHVGVGISGNEGLQ
AANSSDYSIAQFKYLKNLLMIHGAWNYNRVSKC ILYCFYKNIVLYIIEIWFAFVNGFSGQILFERWCIGLYNVMF
TAMPPLTLGIFERSKR ENMLKYPELYKTSQNALDFNTKVFWVHCLNGLFHSVILFWFPLKALQYGTAFGNGKTS
DYLLLGNFVYTFV VITVCLKAGLETSYWTWF SHIAIWGSIALWVFLGIYSSLWPAIPMAPDMSGEAAMLFSSGV
FWMGLLFIPVASLLLDVYKVIKRTAFKTLVDEVQELEAKSQDPGAVVLGKSLTERAQLLKNVFKKNHVNLYRSE
SLQQNLLHGYAFSQDENGIVSQSEVIRAYDTTKQRPDEW

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FIGURE 855

CGACGCGGGAGCCGCACGCGCCGGACGAGGCTCGCTGCGCTCCCTGTTGCCAGCGCGGGCCCGTTGAGGCGGAG
CCCTCAGTTCCCGGCCAGGACACGGTCTGGGCCGCCGAATCTCCGGCCGAAGAGCGGCGGGCGGCAGCGGCGGGAA
AAAAATGAAGAATGAAATTGCTGCCGTTGTCTTCTTTTTCACAAGGCTAGTTCGAAAACATGATAAGTTGAAAAA
AGAGGCAGTTGAGAGGTTTGCTGAGAAATTGACCCTAATACTTCAAGAAAAATATAAAAAATCACTGGTATCCAGA
AAAACCATCGAAAGGACAGGCCTACAGATGTATTTCGTGTCAATAAATTTTCAGAGAGTTGATCCTGATGTCCTGAA
AGCCTGTGAAAAACAGCTGCATCTTGTATAGTGACCTGGGCTTGCCAAAGGAGCTCACTCTCTGGGTGGACCCATG
TGAGGTGTGCTGTCGTAGAGATGGGGTTTCACCATGTTGGCCAGACTGCTCTCAAACCTCTGACCTCGTGATCCG
CCCGCCTTGGCCTCCCAAAGCGCTGGATTACAGGCGTGAGCCACTGCGCCCCGGCCTCCTCCTTTTTTGATTATGTA
TGGAGAGAAAAACAATGCATTCAATTGTTGCCAGCTTTGAAAATAAAGATGAGAACAAGGATGAGATCTCCAGGAA
AGTTACCAGGGCCCTTGATAAGGTTACCTCTGATTATCATTTCAGGATCCTCTTCTTCAGATGAAGAAACAAGTAA
GGAAATGGAAGTGAAACCCAGTTCGGTGACTGCAGCCGCAAGTCCTGTGTACCAGATTTTCAGAACTTATATTTCC
ACCTCTTCCAATGTGGCACCCTTTGCCAGAAAAAAGCCAGGAATGTATCGAGGGAATGGCCATCAGAATCACTA
TCCTCCTCCTGTTCCATTTGGTTATCCAAATCAGGGAAGAAAAAATAAACCATATCGCCCAATTCAGTGACATG
GGTACCTCCTCCTGGAATGCATTGTGACCGGAATCACTGGATTAATCCTCACATGTTAGCACCTCACTAACTTCG
TTTTTGATTGTGTTGGTGTCATGTTGAGAAAAAGGTAGAATAAACCTTACTACACATTAAAAGTTAAAAGTTCTT
ACTAATAGTAGTGAAGTTAGATGGGCCAAACCATCAAACCTATTTTTATAGAAGTTATTGAGAATAATCTTTCTT
AAAAATATATGCACTTTAGATATTGATATAGTTTGAGAAATTTTATTAAAGTTAGTCAAGTGCCTAAGTTTTTA
ATATTGGACTTGAGTATTTATATATTGTGCATCAACTCTGTTGGATACGAGAACCCTGTAGAAGTGGACGATTTG
TTTTAGCCCTTTGAGAATTTACTTTATGGAGCGTATGTAAGTTATTTATATACAAGGAAATCTATTTTATGTCG
TTGTTTAAAGAGAATTGTGTGAAATCATGTAGTTGCAAATAAAAAATAGTTTGAGGCAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

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FIGURE 856

MKNEIAAVVFFFTRLVRKHKDLKKEAVERFAEKLTLILQEKYKNHWYPEKPSKGQAYRCIRVNKFQRVDPDVLKA
CENSILYSDLGLPKELTLWVDPCEVCCRRDGVSPCWPDSCQTPDLVIRPPWPPKALDYRREPLRPASSFLIMYG
EKNNAFIVASFENKDENEKDEISRKVTRALDKVTSDYHSGSSSSDEETSKEMEVKPSSVTAAASPVYQISELIFPP
LPMWHPLPRKKPGMYRGNGHQNHYPVPVFGYPNQGRKNKPYRPIPVTWVPPPGMHCDRNHWINPHMLAPH

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FIGURE 857

AATTTGGGGCCAAGATTAACACCCCTCCTGCAGGAGGAAGACAGCCACCAGCGGCTGCTCATGGGGCTGATGGTG
TCTGAGCTAAAAGACCATTTTTTGAGACACCTACAGGGTGTAGAAAAGAAGAAAATTGAACAGATGGTTCTGGAC
TACATTTCAAACCTGCTGGATCTCATTTGCCACATCGTAGAAACCAATTGGAGGAAACATAATCTTCATTCCTGG
GTTCTCCACTTCAATAGTCGTGGCAGTGCTGCTGAATTTGCAGTTTTTTCACATCATGACCAGGATTCTGGAAGCT
ACAAACAGTTTGTTTTTACCTCTGCCTCCTGGTTTTTCATACTCTGCACACCATCCTCGGGGTCCAGTGTCTCCCT
TTGCATAACCTGCTGCATTGCATTGACAGTGGAGTGTGTCTCTCACTGAAACAGCTGTCTATAAGGCTCATGAAA
GATCTGGATAATACAGAGAAAAATGAAAACTGAAATTCAGTATCATTGTGCGGCTTCCTCCGCTTATTGGGCAG
AAGATTTGTAGACTTTGGGATCATCCTATGAGTTCTAACATCATTTTCGCGGAACCACGTGACGCGACTGCTTCAG
AACTATAAGAAACAGCCTCGGAATTCATGATTAAACAAGTCATCGTTTCAGTGTAGAATTTCTGCCTCTGAACTAC
TTCATTGAAATTCCTGACAGATATAGAGTCCTCCAATCAAGCCCTGTATCCTTTTGAAGGACATGACAATGTGGAT
GCAGAATTTGTAGAGGAAGCAGCTCTGAAACACACCGCGATGCTTTTAGGCTTATTGAAAAAGAAAACGCAATTGG
ATCTGCTGCTGCCATTTTAACTCTTGCTCATTAACCTTACTCCTCTGAGAATTCCTTAACAATATTTAAAATTGGT
AACAAAAATAGTTTAGCCATAATTGTTTAGCCATGTGAGTTTCAGGTTGGTACACGTTTCAGACAGAACTGCTGTA
TCACATTCCAATTTTGAATAGCCAGTGAGCAATCAAGTGTAGAGAAATGATAAATGGCCTAAGAAGGCATACAGT
GGCATAAACGATGCTCTTCCTAGTAGCTTAATAGGCCACAAGCTAGTTTCTGTTGCACTCTGAAATAAAATATGC
TTTAAAAATGTAGGGAACAGTGCTTAGAAAAGCAAAAACCTAGGTGTGTCATTGAAATAATAGGCATAAAAAATTAA
ATGTTACATAAGAACACTATTTGGAAAGAGGGTCCTTTTAAAACTGAATTTGTACTAAATCAGATTTGCCATGT
CCCAGTCCAGAATAATTTGTACTTAGTATTTGCAGCAGGGTTTGTCTTTGTGAATTCAGATGAAACATATTTATT
TTTTTTTATTTATAAAAGGTTGATTTAGGAATATTTTGTGAGTCATTAAAAAACCTGAAACATAAAAAAAAAA
AAAAAAA

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FIGURE 858

NLGPRLTPLLQEEDSHQRLLMGLMVSELKDHFLRHLQGEKKKIEQMVDYISKLLDLICHIVETNWRKHNLSW
VLHFNSRGSAAEFAVFHIMTRILEATNSLFLPLPPGFHTLHTILGVQCLPLHNLLHCIDSGVLLLTETAVIRLMK
DLDNTEKNEKLKFSIIIVRLPPLIGQKICRLWDHPMSSNIISRNHVTRLLQNYKKQPRNSMINKSSF SVEFLPLNY
FIEILTDIESSNQALYPFEGHDNVDAEFVEEAALKHTAMLLGL

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FIGURE 859A

GGCCGCGAGTGCATCTTCCACGAACCTAATTCATCTCTCCAGCAAAGGACACATCTCTCCAGCAAAGGACACCTC
TCTCCAGCAAAGGACACCTGCAGAGATGTCCCCAGTCCTTCACTTCTATGTTTCGTCCCTCTGGCCATGAGGGGGC
AGCCTCTGGACACACTCGGAGGAACTGCAAGGGGAACTGCCAGAGCTGCAGGGCGTCGAGACTGAACTGTGCTA
CAACGTGAACTGGACAGCTGAGGCCCTCCCCAGTGCTGAGGAGACAAAGAAGCTGATGTGGCTGTTTGGTTGCC
CTTACTGCTGGATGATGTTGCTCGGGAGTCCTGGCTCCTTCTGGCTCCAATGACCTGCTGCTGGAGGTGCGGCC
CAGGCTGAACTTCTCCACCCCAACATCCACCAACATCGTGTGAGTGTGCCGCGCCACTGGGCTGGGGCCTGTGGA
TCGTGTGGAGACCACCGGCGCTACCGGCTCTCGTTTGGCCACCCCCCGTCAGCTGAGGTGGAAGCCATTGCTCT
GGCTACCCTGCACGACCGGATGACAGAGCAGCACTTCCCCCATCCCATCCAGAGTTTCTCCCCTGAGAGCATGCC
GGAACCCCTCAATGGCCCTATCAATATACTGGGTGAGGGCCGGCTTGCGCTGGAGAAGGCCAACCAGGAGCTTGG
TCTGGCTTTAGACTCTTGGGACCTAGACTTCTACACCAAGCGCTTCCAGGAGCTACAGCGGAACCCGAGCACTGT
GGAGGCCCTTTGACTTGGCGCAGTCCAATAGCGAGCACAGCCGACACTGGTTCTTCAAGGGCCAGCTCCACGTGGA
TGGGCAGAAGCTGGTGCCTCACTGTTTGAAGTCCATCATGAGCAGCCAGGAATCCTCGAACCCCAACAACGTCTCT
CAAATCTGTGATAACAGCAGTGAATCCAGGGGAAAGGAAGTCCGATTCTACGGCCTGAGGACCCACACGGCC
AAGCCGCTTCCAGCAACAGCAAGGGCTGAGACATGTTGTCTTACAGCAGAGACTCACAACCTTTCCACAGGAGT
ATGCCCCCTTAGTGGTGAACCACTGGCACAGGGGGCCGGATTGAGATGTCCAGTGCACAGGCCGCGGGGCCCA
CGTGGTGGCTGGCACTGCCGGCTATTGCTTTGGAATCTGCATATTCAGGTTACAATCTGCCCTGGGAGGATCT
AAGCTTCCAGTATCCTGGGAATTTTGGCCGGCCCCCTGGAGGTTGCCATTGAAGCCAGTAATGGAGCTTCTGACTA
TGGCAACAAGTTTGGGGAACCACTGCTGGCTGGCTTGGCCGCTCCTTGGGCTCCAGCTCCCAGACGGCCAGCG
GCGTGAGTGGATCAAGCCCATCATGTTTGAAGTGGGGCATTGGGTCCATGGAAGCTGACCACATAAGCAAGGAGGC
CCCAGAGCCAGGCATGGAAGTTGTAAAGGTTGGAGGTCCCGTCTACAGGATTGGAGTTGGAGGTGGAGCTGCTTC
ATCTGTGCAGGTGCAGGGAGATAACACCAGTGACCTGGACTTTGGGGCTGTGCAGCGAGGAGACCCGGAGATGGA
ACAGAAGATGAACCGTGTGATCAGGGCTTGTGTGGAGGCCCCCAAGGGAAACCCCATCTGCAGCCTTCATGATCA
GGGCGCTGGTGGCAATGGCAATGTCTTAAAGAGCTGAGTGACCCAGCTGGAGCCATCATTTACACCAGCCGCTT
CCAGCTTGGGGACCCAAACCCCTGAATGCCCTGGAAATCTGGGGGGCTGAGTACCAGGAATCAAATGCTCTTCTGCT
GAGGTCCCCCAACCGGGAATCTCTGACTCATGTGAGTGGCCGCTGAACGTTGCCCGGCTTGCTTCTGTTGGGACCAT
CACTGGAGACCCGGAGAATAGTGTGGTGGACGATCGGGAGTGTCTGTGAGAAGAAATGGCCAGGGGGATGCCCC
CCCGACACCCCCGCCAACCCCTGTGGACCTGGAGCTCGAATGGGTGCTGGGCAAGATGCCTCGGAAGGAGTTCTT
CCTGCAGAGGAAGCCCCCATGCTGCAGCCTCTGGCCTTGCCCCCAGGGCTGAGCGTGCACCAGGCTCTGGAGAG
GGTTCTGAGGCTGCCCCGCGTGCCAGCAAGCGCTACCTCACCAATAAGGTGGACCGCTCCGTGGGAGGCCTGGT
GGCCAGCAGCAGTGCCTGGGGCCCCCTGCAAACTCCTCTGGCAGATGTAGCGGTTGTGGCACTGAGCCATGAGGA
GCTCATAGGGGCTGCCACAGCCTTGGGAGAACAGCCAGTCAAGAGCCTGCTGGACCCAAAGTTCGCCGCCCGGCT
GGCCGTGGCCGAAGCCCTCACCAACCTGGTGTGTTGCTCTGGTCACTGACCTCCGGGATGTGAAGTGTAGCGGGAA
CTGGATGTGGGCAGCCAAGCTCCCAGGGGAGGGCGCAGCTTTGGCGGATGCCTGTGAGGCTATGTTGGCAGTGAT
GGCAGCCCTGGGTGTGGCAGTGGATGGTGGCAAGGACTCCCTCAGCATGGCTGCTCGGGTTGGCACTGAGACCGT
GCGGGCTCCTGGGTCACTGGTCACTCTCAGCCTATGCCGTCTGCCAGACATCACAGCCACTGTGACCCAGACCT
CAAGCATCCTGAAGGGAGAGGCCATCTGCTCTATGTGGCTCTGAGCCCTGGGCAGCACCGGCTCGGGGGCACAGC
TCTGGCCCACTGCTTCTCCCAGCTTGGGGAAACACCCCTCCAGACCTGGACCTTCTGAGAACTTGGTGCGGGCCTT
CAGCATCACTCAGGGGCTGCTGAAAGACCGCTCCTCTGCTCAGGCCACGATGTGAGTGACGGAGGCCTCGTCAC
ATGCCGTGCTGGAGATGGCCTTTGCTGGAAATTCGCGGGCTACAGGTGGATGTGCTGTCCCCAGGGTTGATGTCTT
GTCTGTGCTGTTGCTGAGGAGCCAGGCCTCGTGCTGGAGGTGCAGGAGCCAGACCTGGCCAGGTGCTGAAGCG
TTACCGGGATGCTGGCCTCCATTGCCTGGAGCTGGGCCACACAGGCGAGGCCGGGGCCCCACGCCATGGTCCGGGT
GTCAGTGAACGGGGCTGTGGTTCTGGAGGAGCCTGTTGGGGAGCTGCGAGCCCTCTGGGAGGAGACGAGTTTCCA
GCTGGACCGGCTACAGGCAGAGCCTCGCTGTGTGGCAGAGGAGGAACGGGGCTGAGGGAGCGGATGGGGCCCCAG
CTATTGCCCTGCCCCCACCTTTCCCAAAGCCTCCGTGCCCCGTGAGCCTGGTGGTCCCAGCCCCGAGTCGCCAT
CTTGCGAGAGGAGGGCAGTAATGGAGACCGGGAGATGGCCGATGCCCTTCCACTTAGCTGGGTTTGAAGTATGGGA
CGTGACCATGCAGGACCTCTGCTCTGGGGCAATTGGGCTGGACACTTTCCTGGCGTGGCCTTCTGTTGGCGGCTT
CAGCTATGCAGATGTCTGGGCTCTGCCAAAGGGTGGGCAGCTGCTGTGACCTTTCATCCCAGGGCTGGGGCTGA
GCTGAGGCGCTTCCGGAAGCGGCCAGACACCTTACGCTGGGCGTGTGTAATGGCTGTCAACTGCTGGCTCTGCT

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FIGURE 859B

CGGCTGGGTGGGAGGCGACCCAATGAGGATGCTGCAGAGATGGGCCCTGACTCCCAGCCAGCCGGCCAGGCCT
TCTGCTACGCCACAACCTGTCTGGGCGCTACGAGTCTCGCTGGGCCAGCGTGCGTGTGGGGCCTGGGCCAGCCCT
GATGCTGCGAGGGATGGAGGGCGCCGTGCTGCCCCGTGTGGAGTGCGCACGGGGAAGGTTACGTAGCATTTCCTT
TCCGGAACCTCCAAGCTCAGATTGAGGCCAGGGGCTTGGCTCCACTGCACTGGGCTGATGATGACGGGAACCCAC
AGAGCAGTACCCTCTGAATCCCAATGGGTCCCCAGGGGGCGTGGCTGGCATCTGCTCCTGTGATGGCCGCCACCT
GGCTGTCATGCCCTCACCCTGAGCGGGCCGTTAGGCCTTGGCAGTGGGCATGGCGACCCCTCCATTTGATACTCT
GACCACCTCCCCCTGGCTCCAGCTCTCTATCAATGCCGAAACTGGACCTGGAAGGGAGCTGCTGACTGGCCAC
AGGGGCTCACCTGGGCCCCATGGCTTTTACCTAAGTGGGTCTGCCCCCTCCCCATGACCTTCAGGAGCACCC
CATATTATTTCCAAAAATATCTTGGACAGACAAGGACCAAAATGCCAAAATCTCAGCGGACTCGATGATCTGCCT
GCTGATGTTCTTCTGTGGCTGTGTCTATTTTCAGTTCTGCTCTAACATGGCATGCCCTTCTCAGCCCAGGAAA
CAGCATGTGGTTCAGAGAAAAGAGCGACAAGGAAAAGTTAGGACTCCTGAGGTCCGAACAGGGGCTTCTGTTGCC
CACTTCACAACACCCAGTGATCACCGGTGTGCAATTGCCTCCTTGGCTCTGAGGGATGTTTTGCGCTCCCTTTTC
TCATCATTGGGGTTAGCGGGTGCAGACAAATTCAGCAATAGTATGCAGATCAGCCCCTCACCACCTCATTGTTCT
CATCTGGAACCTGAACTTTCTGGATTTCTCTTGAAGTGCTACACTGCACTGAATGTAAGGAATTGTTGCTTGTGG
AAGTTTCTCAGCGTTTCTGGCTGTCTTAGGGCTGGCCTCAGAACCCAGCATTCCTGTTATTTGCTTCTAAATTAG
CAGCTCTCTTTTTTTTTTTTTTTTTTGGAGCAGTCTCACTCTGTACCCAGGCTGGAGTGCAGTGGCGTGATCTCG
GCCACTGCAACCTCTGCCTCCTGGGTTCAAGCAATTTTCTGCCTCAGCCTCCCGAGTAGCTGGGAGTACAGGC
ACACACCACCACCCAGCTAATTTTTGTATTTTAGTAGAGATAGGGTTTCACCGTGTCTCCAGGCTGGTCTC
AACTCCTAACCTCAAGTGATTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGGGAGCCACTACAGC
TGGCCCAGCAGCTCTGTTTCTGATAGAGGTGGTTGGGGCTCTCATCCCTAGATCCTAACCTTTAGTATGCTGGA
ATTCTACTCTTCACTTACTGCATTGACTGTTGTTGATTAGTTATTATTGCAAAGCACTGCCACCGGCCTCAGGGA
GTTTATGTGTAATAGAATTAATAATAATAGCTGTGTATAACACTTAGCTCAAGCCACGCATGTGTGAGGCATTTG
GTATGTATCTGAATTAATTCTCACTAAAATTCAGCAAAGGACTTGATAGCCTCTCCCGCCTTTTCAATAAAGGA
TGAATGAAGGTTG

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FIGURE 860

AASASSTNLIHLSSKGHISPAKDTSLQQRTPAEMSPVLHFYVRPSGHEGAASGHTRRKLOGKLPQLQGVETELCY
NVNWTAEALPSAEETKKLMWLFGCPLLLDDVARESWLLPGSNDLLLEVGPRLNFSTPTSTNIVSVCRATGLGPVD
RVETTRRYRLSFAHPPSAEVEAIALATLHDMTEQHFPHPIQSFSPESMPEPLNGPINILGEGRLALEKANQELG
LALDSWDLDFYTKRFQELQRNPSTVEAFDLAQSNSEHSRHWFFKGQLHVDGQKLVHSLFESIMSTQESSNPNNVL
KFCDNSSAIQKKEVRFLRPEDPTRPSRFQQQQGLRHVVFTAETHNFPTGVCPSGATTGTGGRIRDVQCTGRGAH
VVAGTAGYCFGNLHIPGYNLPWEDLSFYYPGNFARPLEVAIEASNGASDYGNKFGEPLVLAGFARSIGLQLPDGQR
REWIKPIMFSGGIGSMEADHISKEAPEPGMEVVKVGGPVYRIGVGGGAASSVQVQGDNTSDLDGAVQRGDPME
QKMNVRVIRACVEAPKGNPICSLHDQGAGGNGNVLKELSDPAGAIITYTSRFLGDPTLNALEIWGAEYQESNALL
RSPNRDFLTHVSARERCPACFVGTTTGDRRIVLVDDRECPVRRNGQGDAPPTPPPTPVDLELEWVLGKMPRKEFF
LQRKPPMLQPLALPPGLSVHQALERVLRPAVASKRYLTNKVDRSVGGLVAQQQCVGPLQTPADVAVVALSHEE
LIGAATALGEQPVKSLLDPKVAARLAVAEALTNLVFALVTDLRDVKCSGNWMMWAAKLPGEAALADACEAMVAVM
AALGVAVDGGKDSLMAARVGTETVRAPGSLVISAYAVCPDITATVTPDLKHPEGRGHLLYVALSPGQHR LGGT
LAQCFSQLGEHPPDLDPENLVRAFSITQGLLKDRLLCSGHDVSDGGLVTCLEMAFAGNCGLQVDVPVPRVDVL
SVLFAEEPGLVLEVQEPDLAQVLKRYRDAGLHCLELGTGEAGPHAMVRVSVNGAVVLEEPVGELRALWEETSFQ
LDRLQAEPRCVAEEERGLRERMGPSYCLPPTFPKASVPREPGGPSPRVAILREEGSNGDREMADAFHLAGFEVWD
VTMQDLCSGAIGLDTFRGVAFVGGFSYADVLGSAKWAAAVTFHPRAGAE LRFRKRPDTFSLGVCNGCQLLALL
GWVGDPNEDAAEMGPDSQPARPGLLL RHNLSGRYESRWASVRVGPGPALMLRGMGAVLPVWSAHGEGYVAFSS
PELQAQIEARGLAPLHWADDDGNPTEQYPLNPNNGSPGGVAGICSCDGRHLAVMPHPERAVRPQWAWRPPPFDTL
TTSPWLQLSINARNWTLEGSC

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FIGURE 861A

CTGCGGCCGCTGGTTTCTTGCCCTTAAGGAGCCCATTCGCTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAA
AGCGGGCAGCAGGATGGTGGTGGATGCGGCCAACTCCAATGGGCTTTCCAGCCCGTGGTCTTCTCCATATTTCG
AGATGTTCTCTCTGCTGATCAAGAGAAGCTTTTTATCCAGAAGTTACGTCAGTGTGCGTCTCTTTGACTTTGT
TTCTGATCCACTAAGTGACCTAAAGTGGAAGGAAGTAAACGAGCTGCTTTAAGTGAAATGGTAGAATATATCAC
CCATAATCGAATGTGATCACAGAGCCTATTTACCCAGAAGTAGTCCATATGTTTGAGTTAACATGTTTCGAAC
ATTACCACCTTCTCCAATCTACGGGAGCGGAATTTGACCCGGAGGAAGATGAACCAACGTTAGAAGCAGCCTG
GCCTCATCTACAGCTTGTATGAATTTTTCTTAAGATTTTTAGAGTCTCCAGATTTCCAACCTAATATAGCGAA
GAAATATATTGATCAGAAGTTTGTATTGCAGCTTTTAGAGCTCTTTGACAGTGAAGATCCTCGGGAGAGAGATTT
TCTTAAACCACCTTCCAGAAATCTATGGGAAATTCCTAGGCTTGAGAGCTTACATCAGAAAACAGATAAATAA
TATATTTTATAGGTTTATTTATGAAACAGAGCATCATAATGGCATAGCAGAGTTACTGGAAATATTGGGAAGTAT
AATTAATGGATTGCTTACCCTAAAGAAGAGCACAAGATTTCTTATTGAAGGTGTTACTACCTTTGCACAA
AGTGAAATCTCTGAGTGTCTACCATCCCCAGCTGGCATACTGTGTAGTGCAGTTTTTAGAAAAGGACAGCACCTT
CACGGAACCACTGGTGTATGGCACTTCTCAATACTGGCCAAAGACTCACAGTCCAAAAGAAGTAATGTTCTTAA
CGAATTAGAAGAGATTTTAGATGTCATTGAACCATCAGAATTTGTGAAGATCATGGAACCCCTCTTCCGGCAGTT
GGCCAAATGTGTCTCCAGCCCACTTCCAGGTGGCAGAGCGAGCTCTCTATTACTGGAATAATGAATACATCAT
GAGTTTAAATCAGTGACAACGCAGCGAAGATTTCTGCCATCATGTTTCTTCTTGTACCGCAACTCAAAGACCCA
TTGGAACAAGACAATACATGGCTTGATATACAACGCCCTGAAGCTCTTCATGGAGATGAACCAAAAGCTATTTGA
TGACTGTACACAACAGTTCAAAGCAGAGAACTAAAGAGAAGCTAAAAATGAAAGAACGGGAAGAAGCATGGGT
TAAATAGAAAACTAGCCAAAGCCAATCCCCAGTACACAGTGTATAGTCAAGCCAGCACCATGAGCATTCCGGT
TGCAATGGAGACAGATGGGCTTTATTTGAAGATGTGCAGATGCTGAGAAAAGACAGTGAAGGACGAGGCTCATCA
GGCAGAGAAAGATCCGAAGAAGGACCGTCTCTTGCACTCCGCAAGTCCGAGCTGCCTCAGGACCCCCACACCAA
GAAAGCCTTGGAAGCTCACTGCAGGGCCGATGAGCTGGCCTCCAGGACGGCCGCTAGCCTCCGGGGCGCCGCGT
CGGGGCCGGGCCCGCCAGTTCTTTCCGGATTCTGTAGAAAATACATACTTCTGTGCCATACCAATCAGTTACA
CTCAAAGCTTTCTTGACCCCGTTCCGTAGGCAATAACGTGCGTCCGCTCAGCGCGAGATTAGGAGTTCAAACA
ATGGTGACTTCCAGAGCCCGCTGGCAGAGCCGCGGGTTGACGACGGTGTCTCGCAGTGTGCGCCGCCACCCAG
CGTAGTCCAAGTCAGACTATTTACAAAGTCAGAGCGATAGGAAAGCACCCCTGCCCTTCATCTTCATGTTCTCCC
AAATGGAACCTTAGGATCTTTTAACATAGGTGGTTCTGTGATAACATCAGTGTTTTCCAAATCAAAGGAACGCTTT
AAAAATAGGACCTATTTTTTAAGACTTTACAGCCTTTGAAATGGTTTCCACGTGATTGTTACGCCAGCAGTTCT
TTTGTGTTGTTTTCAATCTCAGTGAAATGGCTCTTTGCTTTTCGAGTTCTCACGCAACGTACTGGGCAAATGACAA
TCCTCAGCCGCTGGTATTTTCTAAGGGTCTCTTCACTTTTGATGAGTGACATGAACACCGTGTCTCCTTCTCTTG
TGTGTACCTAAAGCCATATTTCCAAGTCTGTGGTACTCCAGGATTCCAGGAGTAAGCCTGTAGAAGAGATTTATT
TTAAAGAGATTGCTCTGAAATTTATCTTAAAGAGCTTGCTCTGTCTACCTTGACAGAAATTGGAGTTTTAAAA
TTATGTGTTAATATTTTTATTTGCAGATTTTCGTTTCCGTCAACTTAAACATTGTTGCCCTTCAACAAGGCTCTTG
AATTAATAAAATTATAGTCTCTAAGAATTCACATTTTATGGAAAGTTAGAGCAAAATCATTTTGAGTTAAGCCA
GTTCTTAGCCTAATGCAAACTGCAGCGCTTTAAGCATAAAGTAACACAACAGCATTGCACGGGGCCGGCACTGC
CGCTGCCTTCACTGAAGGCTGCAGTGCTGTTCTGAGAGCTTGGAGGAGGCACCAGCGAGGATGACGTTTAGTGGA
GCTCTTTCTGTTGAAAAGAGCTCACGTTATCAACACCTTGTAAGGAAAATACAGTGTCTGAGTTTTTCATCGGTCT
TCACATGCTGCTATATATTTCCACAGAGTTCTTGCATGTACTGAGCTTTTGTGTTTAGATGGAATAGCACAGGAG
AAAAATCTTTAACTTAGTGCTTTGTCTATTCTTTATTTCTCTCAGGGTGGCCAGTATTTTGACTTATTTATCCT
GCTTGAAAGCTACTTGAGATGTGTACTGCTATTCTAAACACGTGATCTAGTTTCTTTTCATCTCTGGCATAAGATT
ATATAACTTAATGTTAAGTGTCTTGAGGCATAAAAGACAAAATGTGGCTTATTTTAGGATCTGTTTTTTCATCGA
GGTCTCGGGTATCCTTTCAAAGATAGTGAGAAGCAGACACTGCTCCTTGTGCAGCTCTGGTACCTCCTGCCACT
GCTGTCACTTCAAGCCACTGGCAATGCTTCTGTCTCGTGTCTTGAGGAAAATCACCTGGGGGGAGGGGACTTC
TTGTGGTAAGAGCAAGTGCAGGTATGAAATGCGAAGATTGCCCCAGCTAAAAGTGGAACAAGTCCGCTTTGTGAGA
TGAATACTTCTGAGAACTTGACAAGTATCTCTCCATTTTACCATTATGAAAATATCATTAAAAAAAACAGTT
TAGATGCCTTCTCCTTTTGGGGAAAAAGGGTGCTTTTTATTGTATAAAGCAGCGTCTTATGTATTTTGATATAC
CATTGTTTGAACCTCCGTCTTTAGCTGATAGATTCTCAAATATCCTTGATTTTGGATGTTTCTAGTATGTTTGTGAG
AGAGGTTTCTGGGAAGACTCTTTTTTGCCCTCGGGAAAAGCAAAATATCAATGTTTGGGTGACTGTGTAAAGC

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FIGURE 861B

TCAGTGTGTAAGAACATCTTTTTGTCTAGGTTTTCTTCTGCTCTTTATTGAAGACAAACACTCACCAAAAAGAA
AAATAAAAAGTTTTTCAGAGAACTAATTTTCTTTGGCAAGAGTATTACTTAATATTTTGGCCTCCTAAAGTTTCCC
TAGTTAGTACTCGGACTCCTGTGCTAATTGTCAGCTTACATATCATTGTATAGAGACTGTTTATTCTGTACCAAA
CTGATTTCAAAAGTACTACATTGAAAATAAACCGGTGACTGTTTTCTTCATAAAGTTCTGCGTTTGGCATCTTC
ACTCTTTCCAAAATGTATCTGTACATCAGAAATGTCACATTTCCAAGTGTCTTTTAGTGTGGCCTTTAGTATGG
CTTCCTTTTAATATTGTACATACATTGTATCTTTGTTTTATGGTAATAAGTAATAAAAATGTAGACTTCAAAAAA
AAAAGCGGCCGCAG

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FIGURE 862

MVVDAAANSNGPFQPVVLLHIRDVPPADQEKLFIQKLRQCCVLDFVSDPLSDLKWKEVKRAALSEMVEYITHNRN
VITEPIYPEVVMFAVNMFRTLPPSSNPTGAEFDPEEDEPTLEAAWPHLQLVYEFFLRFLFLESPDFQPNIAKKYID
QKFVLQLELFDSEDPREDFLKTTLHRIYGKFLGLRAYIRKQINNIFYRFIYETEHNGIAELLEILGSIINGF
ALPLKEEHKIFLLKVLLPLHKVKSLSVYHPQLAYCVVQFLEKDSTLTEPVVMALLKYWPKTHSPKEVMFLNELEE
ILDVIEPSEFVKIMEPLFRQLAKCVSSPHFQVAERALYYWNNEYIMSLISDNAAKILPIMFPSLYRNSKTHWNKT
IHGLIYNALKLFMEMNQKLFDDCTQQFKAEKLEKLEKMKEREEAWVKIENLAKANPOYTVYSQASTMSIPVAMET
DGPLFEDVQMLRKTIVKDEAHQAQKDPKKDRPLALRKSELPQDPHTKKALEAHCRADELASQDGR

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FIGURE 863

TTAATGGTAGGAATTTGTATTTTTTGCCTTTGTTTCAGAATACATGACATTGGTAAATATGCCACATGCCTTTGGT
GGAAGTACAACCTGTTGTTATTACTCTATACAAGTATGAGATCAGGGTTAGGAAAAAAGACAAAGAGGTGATGAC
AGACACACAGTGGAAACCCACATCGTCTCATGGCAAACCGAAGAACGGGATGTGGGAAGCTCAGCTTCATTGTA
CTGCAAAGTCCCAGGGTTTTGTTGCACATTTGCTCATGCACATGGGTGGTGGGAGGAAAGGGGGATAGCAGAGAC
ACACAGAAGAGGGTACAGGGTGGGTGAGAAAGAAAGTAGAAGGGCTAATACCCCCAAAGAACAAGGCCAACTACA
CCTGGTGAGCCTCAGAGGGACAGAAACCCAGGAATGATTCCT

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FIGURE 864A

CGAATTCCTCCCTCCCTCCCATACATGCCCCACTGCCCAAATAAAAAAAAAACCAACTATGGGAGAGCAGCC
GAGACAGCAACTAGGGGCGAGGGGAAAGAGACATGGAACTCGAGGGCAGCGGTGAAGAGACCATGCGTGTGCTGGG
AGGGCCCAGAGGCAGCGCGGCACAAACAGCGCAGGTACGAGTCTCTGTGTCTTCCCGGGGTTATGTATAAATA
TAGAGAGATGAGGCCTTCTCTCCCTGCTCTCCCTTCCGCTCCGTGCTGCTCGCCGCGGTCCAGCTCCTCTTTC
CACATGAGGGCGAAGGGAAGGGGGGATGAACAAGTCATCACCGAATTGCAATCAGACCCACATCCATCAGCTTCT
GGATCTTCTGTGCTATTACAGGATTCTTTAAGTGTTGCTGAGTGCCTGCTCCTGGGGACAATTCCCTTTTCCTT
TCTTCAGCCTAACCCGCGGTGGCCCTCGCGGAGTCCGGTCAGCCCCGGGGAGCGCAACCCGGGAGGGGCGTCCAA
GGGGCGTCTCGCGTCTGGGAACGGCCGGGCCCCAGCGGGCTGTGGTTCGCGGGGTGGGGGCGGAGCGGCGAGGC
CCCCCTTACCGGGCTGCGCAGGCCGCCAGGGCCCCGGGCTGAGACGGGGCCGGAGCGGCGCCCCGGCCGCCCG
CGCGGGGTCTCCCCATGGTGACGCGGGGTTCGGGATGTCGAAGACGCTGAAGAAGAAGAAGCACTGGCTCAGCA
AGGTGCAGGAGTGCGCCGTGTCTGGGCCGGGGCCCGGGCGACTTCGGCGCGGAGATCCGCGGTGGCGCGGAGC
GTGGCGAATTCCCCTACCTGGGGCGGCTCCGCGAAGAACCCGGCGGGGGCACCTGCTGCATCGTCTCGGGCAAGG
CGCCCAACCCAAGCGATGTGCTGCTGGAGGTAAACGGGACGCTGTGTCAGCGGGCTCACCAACCGGGACACCTTG
CTGTATCCGCCACTTCCGCGAGCCCATCCGTCTCAAGACTGTGAAACCAGGCAAAGTCATTAATAAAGATTTC
GGCATTACCTAAGTCTTTCAGTTTCAAAAAGGATCAATTGACCACAACTGCAGCAAGTGATCAGAGATAATCTCT
ACTTGAGAACCATTCCATGCACTACAAGGGCCCCCAGGGATGGAGAAGTACCAGGAGTGGATTATAATTTCAATT
CCGTTGAACAGTTCAAAGCACTGGAGGAGAGTGGAGCATTGTTAGAAAGTGGGACATATGATGGAACTTCTATG
GAATCCCAAGCCTCCAGCAGAACCCAGCCCTTTTCAGCCAGATCCAGTTGATCAAGTCTCTTTGATAATGAGT
TTGATGCAGAATCTCAAAGAAAACGAACGACATCTGTGACGAAGATGGAAAGAATGGATAGCTCTCTTCTGAG
AGGAAGAAGATGAGGACAAGGGAGCTATTAATGGCAGTGGAAACGCGAGAAAACAGAGAGAGGCATTCTGAGTCAT
CTGACTGGATGAAGACTGTTCCAAGTTACAACCAAAACAAATAGCTCCATGGACTTTAGAAATTATATGATGAGAG
ATGAGACTCTGGAACCACTGCCCAAAAACCTGGGAAATGGCTACACTGACACAGGGATGATCTACTTCATTGACC
ACAATACCAAGACAACCACTTGGTTGGATCCTCGTCTTTGTAAGAAAGCCAAAGCCCCCTGAAGACTGTGAAGATG
GAGAGCTTCCCTTATGGCTGGGAGAAAATAGAGGACCCTCAGTATGGGACATACTATGTTGATTTCACTCTTGTG
CCCAAGCTGGAGTGCAATGGCATGATCTCGGCTCACTGCAACCTCCGCCTCCTGGGTTCAATCACCTTAACCAGA
AAACCCAGTTTGAAAATCCAGTGGAGGAAGCCAAAAGGAAAAAGCAGTTAGGACAGGTTGAAATTGGGTCTTCAA
AACCAGATATGGAAAATCACACTTCACAAGAGATCCATCCAGCTTAAAGGTGTCCTTGTTGAGCATCACTGA
AAAAAGCACAAATGGGATTTGGTTTTACTATTATTGGTGGAGATAGACCTGATGAGTTCCTACAAGTGA AAAATG
TGCTGAAAGATGGTCCCGCAGCTCAGGATGGGAAAATGCAACAGGCGATGTTATTGTAGACATCAATGGCAACT
GTGCTTTCGGTCACACTCATGCAAGATGTTGTCCAGATGTTTCAATTGGTACCTGTCAATCAGTATGTAAACCTCA
CTTTATGTCGTGGTTATCCACTTCCTGATGACAGTGAAGATCCTGTTGTGGACATTGTTGCTGCTACCCCTGTCA
TCAATGGACAGTCATTAACCAAGGGAGAGACTTGCATGAATCCTCAGGATTTTAAGCCAGGAGCAATGGTTCTGG
AGCAGAATGGAAAATCGGGACACACTTCGACTGGTGTGATGGTCTCAATGGACCATCAGATGCAAGTGAGCAGAGAG
TATCCATGGCATCGTCAGGCAGCTCCAGCCTGAACTAGTACTATCCCTTTGATTAAAGGGCCCTAAAGGGTTTG
GGTTTGCAATTGCTGACAGCCCTACTGGACAGAAGGTGAAAATGATACTGGATAGTCAGTGGTGTCAAGGCCTTC
AGAAAAGAAGATATAATTAAGGAAATATACCATCAAAATGTGCAGAATTTAACACATCTCCAAGTGGTAGAGGTGC
TAAAGCAGTTTCCAGTAGGTGCTGATGTACCATTTGCTTATCTTAAGAGGAGGTCTCTCTTCAACAACCAAACTG
CCAAAATGAAAACAGATAAAAAGGAAAATGCAGGAAGTTTGGAGGCCATAAATGAGCCTATTCTCAGCCTATGC
CTTTTCCACCGAGCATTATCAGGTCAGGATCCCCAAAATTGGATCCTTCTGAGGTCTACCTGAAATCTAAGACTT
TATATGAAGATAAACCACCAAAACACCAAGATTTGGATGTTTTCTTCGAAAACAAGAGTCAGGGTTTGGCTTCA
GGGTGCTAGGAGGAGATGGACCTGACAGTCTATATATATTGGGGCTATTATTCCCTGGGAGCAGCTGAGAAAG
ATGGTCCGCTCCGCGCAGCTGATGAACTAATGTGCATTGATGGAATTCCTGTTAAAGGGAAATCACACAAACAAG
TCTTGACCTCATGACAACCTGCTGCTCGAAATGGCCATGTGTTACTAACTGTCAGACGGAAGATCTTCTATGGAG
AAAAACAACCCGAGGACGACAGCTCTCAGGCCTTCATTTCAACACAGAATGGATCTCCCCGCCTGAACCGGGCAG
AGGTCCAGCCAGGCCTGCACCCAGGAGCCCTATGATGTTGTCTTGCAACGAAAAGAAAATGAAGGATTTGGCT
TTGTCTCCTCACCTCCAAAAACAACCACTCCAGGAGTTATTCCTCATAAAATGGCCGAGTCATAGAAGGAA
GTCCGGCTGACCGCTGTGGAAAACCTGAAAGTTGGAGATCATATCTCTGCAGTGAATGGGCAGTCCATTGTTGAAC
TGTCTCATGCTAACATTGTTTCAGCTGATCAAAGATGCTGGTGTACCGTCACACTAACGGTCATTGCTGAAGAAG

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FIGURE 864B

AGCATCATGGTCCACCATCAGGAACAAACTCAGCCAGGCAAAGCCCAGCCCTGCAGCACAGGCCCATGGGACAGT
CACAGGCCAACCACATACCTGGGGACAGAAGTGCCCTAGAAGGTGAAATTGGAAAAGATGTCTCCACTTCTTACA
GACATTCTTGGTCAGACCACAAGCACCTTGACACAGCCTGACACCGCAGTAATTTAGTTGTAGGCAGTCGGCACA
ATCAGAACCTTGGTTGTTATCCAGTAGAGCTGGAGAGAGGCCCGGGGCTTTGGATTTCAGCCTCCGAGGGGGGA
AGGAGTACAACATGGGGCTGTTTCATCCTTCGTCTTGCTGAAGATGGTCCTGCCATCAAAGATGGCAGAATTCATG
TTGGTGACCAAATTGTTGAAATCAATGGGGAACCTACACAAGGAATCACACATACTCGAGCAATTGAGCTCATT
AGGCTGGTGGAATAAAAGTTCTTCTTTTGGAGCCAGGAAGTGGCTTGATACCTGACCATGGTTTGGCTCCTT
CCGGTCTGTGCTCCTACGTGAAACCCGAGCAACATTAAGGCTTTCAGGGCTTTTCTTGGTCTTTCCTTAAAAAGA
CTTGGTAAATTTGCATGTCTTGTAATCACTTTCTTCTTTGTTTTCTTTTAAATTAAAAATGATGCTATTAAAT
AAAAAAAAAAAAA

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FIGURE 865

MSKTLKKKKHWLSKVQECASVWAGPPGDFGAEIRGGAERGEFPYLGRLREEPGGGTCCIVSGKAPNPSDVLLEVN
GTPVSGLTNRDTLAVIRHFRP IRLKTVKPGKVINKDLRHYLSLQFQKGSIDHKLQQVIRDNLYLRTIPCTTRAP
RDGEVPGVDYNFISVEQFKALEESGALLESPTYDGNFYGTPKPPAEPSPFQDPDPVDQVLFDFNEFDAESQRKRRTS
VSKMERMDSSLPEEEDEDEDKGAINGSGNAENRERHSESSDWMKTVP SYNQTNSSMDFRNYMMRDETLEPLPKNWE
MAYTDTGMIYFIDHNTKTTTTLWLDPRLCCKAKAPEDCEDGELPYGWEKIEDPQYGTYYVDFTLVAQAGVQWHDLS
LQPPPPGFNHLNQKTQFENPVEEAKRKKQLGQVEIGSSKPDMEKSHFTRDPSQLKGVLV RASLKKSTMGFGFTII
GGDRPDEFLQVKNVLKDGPAAQDGKIAPGDVIVDINGNCVFGHTHADVVQMFQLVPVNQYVNLTLCRGYPLPDDS
EDPVVDIVAATPVINGQSLTKGETCMNPQDFKPGAMVLEQNGKSGHTSTGDGLNGPSDASEQRVSMASGSSQPE
LVTIPLIKGPKGFGFAIADSPTGQKVKMILDSQWCQGLQKEDI I KEIYHQNVLNLTHLQVVEVLKQFPVGADVPL
LILRGPPSTTKTAKMKTDKKENAGSLEAINEPI PQMPFPFPSIIRSGSPKLDPSEVYLKSKTLYEDKPPNTKDL
DVFLRKQESGFGFRVLGGDGPDSIYIGAIIPLGAAEKDGRRLRAADELMCIDGIPVKGKSHKQVLDLMTTAARNG
HVLLTVRRKIFYGEKQPEDDSSQAFISTQNGSPRLNRAEVPARPAQPEPYDVVLQRKENEGFGFVILT SKNKPPP
GVIPHKIGRVIEGSPADRCGKLKVGDHISAVNGQSIVELSHANIVQLIKDAGVTVTLTVIAEEHHGPPSGTNSA
RQSPALQHRPMGQSQANHIPGDRSALEGEIGKDVSTSYRHSWSDHKHLAQPD TAVISVVGSRHNQNLGCYPVELE
RGPRGFGFSLRGGKEYNMGLFILRLAEDGPAIKDGRIHVG DQIVEINGEPTQGITHTRAIELIQAGGNKVLLLLR
PGTGLIPDHGLAPSGLC SYVKPEQH

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FIGURE 866

[illegible]

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FIGURE 867

MDFSRNLYDIGEQLDSEDLASLKFLSLDYIPQRKQEPKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLL
ITYLNTRKEEMERELQTPGRAQISAYRVMLYQISEEVSRSELRSFKFLLQEEISKCKLDDDMNLLDIFIEMEKRV
ILGEGKLDILKRVCAQINKSLLKIINDYEFSKERSSSLEGSPDEFSGQSLPNEKQTSGLSDHQSQFCKS
TGESAQTSQH

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FIGURE 868

AAGCTAAATAAATATAGCTTTATTCATCTTTCAGAGATTGCCATTTAGCCTAGAAAATTACATCAAAAGATGAAC
TGATTTTTGCTTGAAAAAGTCAACCATGTTTAATTGCTCACACAATTTTAATTACAACAGATGTAATTTCTAATA
TATACCATTTCGATCACACACCATTTTTATGTTCTGGAGTGAGACCTGGGAGTATTTTGCTTAAGACTTTCTCATT
CTCTAAACTAGCTTTGGCAGTTAACAATGTGGAGAATTCAGCACAAAAAGCACCCCTAGCCCAGCCTTTTTATTT
TATTTTTTTAAATCTCTATTTAACCCCTTCAAAGTTTCCTTTGCAGCCATATGCATTTCTAGGTGGCTCTACCTGT
AGAAGGCTGCACTTTCCAAGCGGCGAGGGACTTTAATTCTCACTTXCCACCACTCC

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FIGURE 869

GGCACGAGGGAGGTCTGCATGAAGGGGATCCCCTACATCGCAGCCTACCAGAAGGAACTGGCTCATTCCCAGCCG
GCGGTGCAGCCCCGGCTCAAGCTGCTCCTGATGGGGCATAAGGCTGCAGGAAAGACTTTGCTGCGCCACTGCCTC
ACCGAGGAGAGAGTGGAGGGATGCCCAGGAGGAGGGGACAAGGAGAAGTGCTACCCACCGTCACCTCCCCCTGTG
AGCAAGGGCATCGAGGTGACCAGCTGGACGGCCGATGCCTCCCGGGGCCTGCGGTTTCATCGTGTATGACTTAGCT
GGGGATGAAAGTTATGAGGTGATCCAGCCCTTCTTCCTGTCCCCAGGGGCCCTATACGTGCTGGTGGTCAACTTG
GCCACCTATGAGCCTCGCCACTTTCTTACCACCGTGCGGCTCCTTCTTGATCGGGTCGGGCGAGAGTGCCCCAC
GCGGTGGTGTGCATCGTGGGCACCCACGCAGACCTGTGCGGAGAGCGTGAGCTGGAGGAGAAATGTCTGGACATT
CACCGCCAGATCGCCCTGCAGGAGAAGCACGACGCGGAGGGACTGAGCCGCTTGGCCAAGGTGGTGGACGAGGCA
CTGGCCCCGGGACTTCGAGCTGCGCTCTGCCAGCCCCACGCAGCCTACTATGGCGTTTTCGGACAAGAACCTTCGA
CGGCGCAAGGCCCATTTTCAATACCTGCTCAACCACCGGCTGCAGATCCTCTCCCCCGTGTTCCTGTTAGCTGC
AGGGACCCGCGCCACTTACGACGCCTTCGGGACAAGTTGCTGTGAGTTGCTGAGCACCGAGAGATCTTCCCCAAC
TTACACAGAGTACTGCCTCGATCCTGGCAGGTGCTGGAGGAACTGCATTTCCAGCCACCTCAGGCCCCAGCGACTG
TGGCTAAGCTGGTGGGACTCGGCGCGCTTGCGCCTGCAGGCGGGTCTGACCGAGGACCGACTGCAGAGTGCCCTC
TCCTACCTGCATGAGAGCGGCAAGCTACTCTACTTTGAGGACAGTCCGGCTCTCAAGGAGCACGTCTTCCACAAC
CTCACCCGCCTCATCGACATCCTCAATGTCTTCTTCCAGAGGGATCCCTCTTTGCTGCTGCATAAGCTGCTCCTA
GGGACCAGTGGAGAGGGCAAGGCGGAGGGGAAAGCTCCCCGCCATGGCGCGGTCCACCCCCAGCCAGGAACTG
CTCCGGGCCACCCAGCTCCATCAGTATGTGGAGGGCTTTCTGTTGCATGGGCTCTTGCCAGCTCATGTCAATCGG
TTGCTGCTTAAGCCTCATGTCCAGGCCCCAGCAGGACTTGACAGCTGTTGCTGGAGCTGCTGGAGAAGATGGGACTC
TGTTACTGCCTCAATAAACCCAAGGGCAAGCCTTTGAATGGGTCCACAGCTTGGTACAAGTTCCCATGCTATGTG
CAGAACGAGGTGCCCCATGCAGAAGCCTGGATTAATGGGACCAACCTAGCTGGGCAGTCTTTTGTTGGCTGAGCAG
TTGAGATTGAATATAGCTTTCTTTTACTTTTCCACCTGGGTTGTTTGCACGCTACAGTGTCCAGATCAACAGC
CATGTGGTGCACAGGTTCGGATGGTAAATTTAGATCTTTGCCTATAGAGGGAAAGTTCTGTGGTTGTGAGTTAC
AGACCTGCCAGGGGAGTCTGCAGCCAGACACCCTGTCCATTGCTAGCCATGCATCATTACCAAATATATGGACC
GCATGGCAAGCCATAACCCCTTGTTGGAGGAACTGAATGTCTTACTTCAGGAATGGCCTGGACTGCACTACACC
GTGCACATTCTCTGTTCTAAGTGCCTTAAGAGAGGATCGCCCAATCCACATGCTTTTCCAGGGGAGTTGCTGAGT
CAGCCCAGACCGGAAGGAGTGGCAGAGATCATTTGCCCCAAGAACGGCAGCGAGCGAGTAAATGTTGCCTTGGTT
TACCCACCCACGCCGACTGTGATCAGCCCCTGTTCCAAGAAGAATGTTGGTGAAAAGCACAGAAACAGTGACGT
TTGTGGCTGTGGAATTTCCATGGAGAAAAGAGAGCATCTGAACACCTGGACCATCTTTTGACCTGGCAGACCCCT
CTGCACTCACCCAGCGTGTCTGTGAACTTGAGTGACAACGCGTGCTTGAGGGTGCTTTTTTGATGACTGGGG
AAGAGGTGGGGAGGGGTGGTGGGGGAAGCATGGACGAGAACATGGAGCAAATGTTTTACAACCTGAACCTCAG
AACTGTGATCCTCCAAGGAGCGCGCTACTTGAAGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 870

ATGCGGGAGATCGTGCACATCCAGGCCGGCCAGTGCGGCAACCAGATCGGGGCCAAGTTCTGGGAAGTCA~~T~~CAGT
GATGAGCATGGCATCGACCCCAGCGGCAACTACGTGGGCGACTCGGACTTGCAGCTGGAGCGGATCAGCGTCTAC
TACAACGAGGCCTCTTCTCACAAGTACGTGCCTCGAGCCATTCTGGTGGACCTGGAACCCGGAACCATGGACAGT
GTCCGCTCAGGGGCCTTTGGACATCTCTTCAGGCCTGACAATTTTCATCTTTGGTCAGAGTGGGGCCGGCAACAAC
TGGGCCAAGGGTCACTACACGGAGGGGGCGGAGCTGGTGGATTCCGTCCTGGATGTGGTGCAGGAGGAGTGTGAA
AACTGCGACTGCCTGCAGGGCTTCCAGCTGACCCACTCGCTGGGGGGGGGACGGGCTCCGGCATGGGCACGTTG
CTCATCAGCAAGGTGCGTGAGGAGTATCCCGACCGCATCATGAACACCTTCAGCGTCGTGCCCTCACCCAAGGTG
TCAGACACGGTGGTGGAAACCCTACAACGCCACGCTGTCCATCCACCAGCTGGTGGAAAACACGGATGAAACCTAC
TGCATCGACAACGAGGCGCTCTACGACATCTGCTTCCGCACCCTCAAGCTGGCCACGCCCACCTACGGGGACCTC
AACCACCTGGTATCGGCCACCATGAGCGGAGTCACCACCTCCTTGCGCTTCCCGGGCCAGCTCAACGCTGACCTG
CGCAAGCTGGCCGTCAACATGGTGCCCTTCCCGCGCCTGCATTCTTCATGCCCGGCTTCGCCCCCTCACCCAGG
CGGGGCAGCCAGCAGTACCGGGCCCTGACCGTGCCCGAGCTCACCAGCAGATGTTTCGATGCCAAGAACATGATG
GCCGCCTGCGACCCGCGCCACGGCCGCTACCTGACGGTGGCCACCGTGTTCCGGGGCCGCATGTCCATGAAGGAG
GTGGACGAGCAGATGCTGGCCATCCAGAGCAAGAACAGCAGCTACTTCGTGGAGTGGATCCCCAACACGTGAAG
GTGGCCGTGTGTGACATCCCGCCCCGCGGCCTCAAGATGTCCTCCACCTTCATCGGGAACAGCACGGCCATCCAG
GAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGC
GAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACATGAACGACCTGGTGTCCGAGTACCAGCAGTAC
CAGGACGCCACGGCCGAGGAAGAGGGCGAGATGTACGAAGACGACGAGGAGGAGTCGGAGGCCACGGGCCCCAAG
TGAAACTGCTCGCAGCTGGAGTGAGAGGCAGGTGGCGGCCGGGGCCGAAGCCAGCAGTGTCTAAACCCCCGAGC
CATCTTGCTGCCGACACCCTGCTTTCCCCATCGCCCTAGGGCTCCCTTGCCGCCCTCCTGCAGTATTTATGGCCT
CGTCTCCCCACCTAGGCCACGTGTGAGCTGCTCCTGTCTGTCTTATTGCAGCTCCAGGCCTGACGTTTTAC
GGTTTTGTTTTTTTACTGGTTTTGTGTTTATATTTTCGGGGATACTTAATAAATCTATTGCTGTGAGATACCTT

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FIGURE 871

MREIVHIQAGQCGNQIGAKFEVISDEHGIDPSGNYVGDSDLQLERISVYYNEASSHKYVPRAILVDLEPGTMDS
VRSGAFGHLFRPDNFIFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKECENCDCLOGFQLTHSLGGGTGSGMGT
LISKVREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSIHQLVENTDETYCIDNEALYDICFRTLKLATPTYGDL
NHLVSATMSGVTTSLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVATVFRGRMSMKEVDEQMLAIQSKNSSYFVEWIPNNVKVAVCDIPPRGLKMSSTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEMYEDDEESEAQGPK

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FIGURE 872

ACGCCCTATACAACCTTGGCTTCACATACTTTTACACTAACTTTTATATGATTTTTAAAACTGGTCTGATCGGACT
TCTCGTCCTGGGACACTGTTTACTGGAGTCTGGCCGGCTCTCCGTGCTCCTCTTGGTACCTCATTTTGGGGAGAA
CCTTAAACCCACTCGAGCAGATAATCTCCGCCCTTGACCGGTGCCACCAAAGAAGGGTTGGAACCAATGTGGACTTT
TCTGGGCATTGCCACTTTACCTATTTTTATAAGAAGTTGCGGGACTTCATCACTTTGGCCAAACAGGGAGGTCCT
GTTGTGCGTGCTGGTGTTCCTCTCGCTGGGCCCTGGTGCTCTCCTACCGCTGTGCGCCACCGAAACGGGGGTCTCCT
CGGGCGCCAGCGGAGCGGCTCCAGTTCGCCCTCTTCTCGGATATTCTCTCAGGCCTGCCTTTTCATTGGCTTCTT
CTGGGCCAAATCCCCCCTGAATCAGAAAATAAGGAGCAGCTCGGGGCCAGGAGGCGCAGAAAAGGAACCAATAT
TTCAGAAACAAGCTTAATAGGAACAGCTGCCTGTACATCAACATCTTCTCAGAATGACCCAGAAGTTATCATCGT
GGGAGCTGGCGTGCTTGGCTCTGCTTTGGTAGCTGTGCTTTCCAGAGATGGAAGAAAGGTGACAGTCATTGAGAG
AGACTTAAAAGAGCCTGACAGAATAGTTGGAGAATTCCTGCAGCCGGGTGGTTATCATGTTCTCAAAGACCTTGG
TCTTGGAGATACAGTGGAAGGTCTTGATGCCCAGGTTGTAAATGGTTACATGATTGATCAGGAAAAGCAAATC
AGAGGTTGAGATTCTTACCCTCTGTCTAGAAAACAATCAAGTGCAGAGTGGAAGAGCTTCCATCACGGAAGATT
CATCATGAGTCTCCGGAAGCAGCTATGGCAGAGCCCAATGCAAAGTTTATTGAAGGTGTTGTGTTACAGTTATT
AGAGGAAGATGATGTTGTGATGGGAGTTCACTACAAGGATAAAGAGACTGGAGATATCAAGGAACTCCATGCTCC
ACTGACTGTTGTTGCAGATGGGCTTTTCTCCAAGTTCAGGAAAAGCCTGGTCTCCAATAAAGTTTCTGTATCATC
TCATTTTGTGGCTTTCTTATGAAGAATGCACCACAGTTTAAAGCAAATCATGCTGAACTTATTTTAGCTAACCC
GAGTCCAGTTCTCATCTACCGGATTTTCATCCAGTGAAACTCGAGTACTTGTTGACATTAGAGGAGAAATGCCAAG
GAATTTAAGAGAATACATGGTTGAAAAAATTTACCCACAAATACCTGATCACCTGAAAGAACCATTCTTAGAAGC
CACTGACAATTCTCATCTGAGGTCCATGCTAGCAAGCTTCCTTCCTCCTTCATCAGTGAAGAAACGAGGTGTTCT
TCTTTTGGGAGACGCATATAATATGAGGCATCCACTTACTGGTGGAGGAATGACTGTTGCTTTTAAAGATATAAA
ACTATGGAGAAAACCTGCTAAAGGGTATCCCTGACCTTTATGATGATGCAGCTATTTTCGAGGCCAACAAATCATT
TTACTGGGCAAGAAAAACATCTCATTCCCTTTGTCGTGAATATCCTTGCTCAGGCTCTTTATGAATTATTTTCTGC
CACAGATGATTCCCTGCATCAACTAAGAAAAGCCTGTTTCTTTATTTCAAACCTGGTGGCGAATGTGTTGCGGG
TCCTGTTGGGCTGCTTTCTGTATTGTCTCCTAACCTCTAGCTTTAATTGGACACTTCTTTGCTGTTGCAATCTA
TGCCGTGATTTTTTGCTTTAAGTCAGAACCTTGGATTACAAAACCTCGAGCCCTTCTCAGTAGTAGTGCTGTATT
GTACAAAGCGTGTTCTGTAATATTTCTCTAATTTACTCAGAAATGAAGTATATGGTTTCATTAAGCTTAAAGGGG
AACCATTTGTGAATGAATATTTGGAACCTTACCAAGTCCTAAGAGACTTTTGGAGAGGATATATATAGCATAGTA
CCATACCACTTATAAAGTGGAAACTCTTGGACCAAGATTTGGATTAAATTTGTTTTTGAAGTTTTTGTATATAAA
TATGTAAATACATGCTTTAATTTGCAATTTAAAATGAAGGGGTTAAATAAGTTAGACATTTGAAAGAAATGATTG
TTACCATAAATTAGTGCTAATGCTGAGGAGAACTACAGTTTTTCTTTTGAATTTAGTATTTGAGATGAGTTGTTG
GGACATGCAATAAAATGAAGAATGAC

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FIGURE 873

MWTF LGIATFTYFYKKFGDFITLANREVLLCVLVFLSLGLVLSYRCRHRNGLLGRQRSGSQFALFSDILSGLPF
IGFFWAKSPPESENKEQLGARRRRKGTNISETSLIGTAACTSTSSQNDPEVIVGAGVLGSALVAVLSRDGRKVT
VIERDLKEPDRIVGEFLQPGGYHVLKDLGLGDTVEGLDAQVVGNGYMIHDQESKSEVQIPYPLSENNQVQSGRAFH
HGRFIMSLRKAAMAEPNAKFIEGVVLQLEEDDVVMGVQYKDKETGDIKELHAPLTVVADGLFSKFRKSLVSNKV
SVSSHVVGFLMKNAPQFKANHAELILANPSPVLIYRISSETRVLVDIRGEMPRNLREYMVEKIYPQIPDHLKEP
FLEATDNSHLRSM LASFLPPSSVKKRGVLLLGDAYNMRHPLTGGGMTVAFKDIKLWRKLLKGIPDLYDDAAIFEA
NKSFYWARKTSHSEFVNILAQALYELFSATDDSLHQLRKACFLYFKLGGE CVAGPVGLLSVLSPNPLALIGHFFA
VAIYAVYFCFKSEPWITKPRALLSSSAVLYKACSVIFPLIYSEM KYMVH

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FIGURE 874

GGCGCCATTTTGTGAGCCTGCGACCGAGTGGGAGTGGAGTGGAGCGGCTGTGGTTGCCGACTCTTTCCTCTTC
CCCACGGTCCAGTCAGCGGGTTAATTAGGCCATCGGCCCTCGAGCCGAGACTTGTCTCTTATTTAGTTCTGGGGA
GCGCCTCGTCGACATGAGTGTGAGGAGGAAAAACAACCTTCGAGGGCAGAGTGAGTACAAAGCCGCGGGAGCCGTC
TAGGCGGCGGCCCAATGCTCGGGGTTTACGAGGAAACAAGCGCGGTTCGGGCGGGGTTGCGGGTAGTCCCGCGAGGA
GCAACCTCTGGAGCCATCGCGATTGATTCTCTCCCATCCCAAGATGGCTTCTGGGTTCCACTCCTTCCCCAAACAC
CACGGATAACACCCCTCCCCCTTTTTTGGAGGCTGACTGATACCTGGACTTCTGGGTCTCTTCCCTCCCCGCC
CCGATTGCTTCTCTCTTCTCCCCACCCCTGAGGCTTCTTATGTCTGCTCCGAGGTGTGGGTCCCCGTGCGG
TTGGGCGGGAGGAGGCGGCAGGGAGCTCCCCCTCCGTCCGGATAGTGGTAGGTGCTTCTGCGGTGGCATTCTGG
CGACCCCGAGCATCGTAGAGGGTCTCGGGATCGAAAGTGC GCGGGGCTGCTTTCCGGGCGGGGAGAAGCTGGCGT
GGGACTAGCTGGGGCCTGTGTCTCTTGGCTCTCTATTTAGTGAGCGGCCGCTCTCTGTTGGAACCGCGGCG
TTGCGTCTAAAAAGGCGAAAGCCTTGAGGTTGAAGGTGGGACGAGCCTAATGAAGTGGTTAGTCAACGACCGCAC
CGACCCCTAAGCGTTCTTAAGACGAGAGCTGTGAGGGGAAACTACGCAAGGAGCCCTTTTCCCTTAATGTCCCTT
CGACTTCTCTTCACTTCGAAATGAATGTGGAATGCTGTACGCCTTATTTTTCTAATTCCTCGATGTTGGGT
TTTTCTCTTCTTATATCTCAACTTTTAATGCTCTTCTTCTATGACCTTTCATCTAAAACTGACCACTCCTTT
ACAGGTTTTTACGGTAAAAAATCGGTCTTCTTTAATCTTACATAGCTGAACGAATTCATTGGCTCAG
TATTTTTAAGATAACTAGTCAGTATATACTGTTCTGTAACTTAAAAGATGACCTGAAAATTAACAGGCCCTCTCC
CATTTCTCTTCTCACTCTATCCCCACCGAAGAGGGCTCAGAAAAAGTTTTTATTAATATATTTGGGGTCGGAG
AAATACAAACATCACAAAGAATACGATATCCCCAGCTTAAATGTACTGGAACGTTTGTGAGTGAGTTTCATTTC
AAAGTTTACCCTACATAGGGAATTGTAGAAGTGAGTTAGTAGAAGTGAGTTCGTGTGAAACCCTGGAAAGAAAC
AAAAGCCCCATGCAACACGTTCCGGGCTGTTGTGTAGATGTTTATTCTAGTCACTAGGGGAAGCACATAAAAAACA
CCTGAGGTGTGTGTGCTGAAGGGCGAATTTTGTCTTTTGGGGAGTTCATGATATAAACATCTAGAACCAAAAAG
TCAAATCAGAAGGTCAGTTTAGGCTTTAGTTCTCTTTGAGGAAAGATTTAAAGCAATAGACTATAATAGTTACCC
GGTAGACTAAAAAATTTGCCTTTAATTCTTTTGATTGGAATTTTTTTTACAAAGTTTGGAGCATGGAAACAAAT
GAAAATTGAACCTGCTTATTTTTTAGGATGGTGTATTGATGGCCCCAACAGAACTTTCTAAAATCATGCGATAAA
CATATATGATAGTAGTTGTAAATGCTTCTTGTGTTTGAAGATGTTGAGTAATTATCGATAGAAATTTTGTGTCC
ATTCATACATTCTTCAATTAACCTTTCATTGTTAAAAAATTGGGGGATTGATGTTTGGTTTGGTTTGTGGGGAGT
GAAGAGGACTACTGGAGGGACCTTGTGTTGCTTCTTTTTCTTTTTTAAATTTATCATCAAGTCTAGGAAAGGA
GTAAGTTGCCGACAATTGTCACTTTTCCCTCCTAAGAAAGTAACATGTTAAGATTCCCACCTACCAGCCTGGGTG
ACAGTGAGACTCCCGTCTCNNNNNNNNNNNNNNNNNNNTTCCACCCACTTTTAAGCTAAAGTATATGTAGGCA
TTAAAGATTTATTTAATAGAAATAAAGGGCCCTCTTACGGCCCTTTGTGGTCATAGGAAATATTTTTTTCACAAG
TGGTACCCAAGTGATTT

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FIGURE 875

RHFAGACDRVGVEWSGCGCRLFFLPHPVSGGLIRPSALEPRLVSYLVLGSAST

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FIGURE 876

CCGCCGCCGATCTGAGGGAGGTACCCTGGAAACCACCTTTTATCGGTGGGGAAGTGCAGTCGCGGTGGGCGGC
TCTGGGGGCCAGCGAAACGGGAGGCCTCTAAATCTTTAGGTTGGGGCTGCATTGCCCTGGAGCCGCACTCTTGAG
TCCGAGGCCATCTTTTGTGGAGAAGGCGTCGGCGTTGGCGTTTTCCCGAGGTTGGGCTGTACAGTGTCTCCGTC
CGCGGAAAAAGAAGCCTCTGAACCCGCGCCGGCCCGCAGCCCCCGTGCCTTCCGGCCGCTGCTCGCCGTCGCCAG
AGGCTAGGCCACGTTTCCCCCAGTGCCGAGGTGTTTCTGTGACCCTCCCTCCACTCCCATTCCCTTCTGAAAGGG
CACCTGCTCTTGGTGAGAAAAGAAATTATAGCACGAAGAGCCAGTATCAGAAGAGTATCCATCACCCGCAGCAAC
CGCTCAGGGAACACCATCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 877

CTCGACTCTTAGCTTGTCGGGGACGGTAACCGGGACCCGGTGTCTGCTCCTGTGCGCTTCGCCTCCTAATCCCTA
GCCACTATGCGGTGAGTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTC
TACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCC
TTCAACACCTTCTTCAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACA
GTCATTGATGAAGTTCGCACCTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGAT
GCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCGC
AAGCTGGCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAACTGGTTCTGGG
TTCACCTCCCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAAGTCCAAGCTGGAGTTCTCCATTTACCCA
GCACCCAGGTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCTGGAGCACTCT
GATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTCGATATCGAGCGCCCAACC
TACACTAACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTG
AATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTACCCCCGCATCCACTTCCCTCTGGCCACATATGCC
CCTGTCATCTCTGCTGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCA
GCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTG
GTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCAGTTTGTGGATTGGTGCCCC
ACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCTGGTGGAGACCTGGCCAAGGTACAGAGA
GCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATG
TATGCCAAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTAGAGGCCCGTGAA
GATATGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGA
GAGGAATACTAAATTATCCATTCTTTTGGCCCTGCAGCATGTCATGCTCCAGAATTCAGCTTCAGCTTAACTG
ACAGACGTTAAAGCTTCTGTTAGATTGTTTTCACTTGGTGATCATGTCTTTCCATGTGTACCTGTAATATTT
TTCCATCATATCTCAAAGTAAAGTCATTAACATCAAAAAAAAAAAAAAAAAA

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FIGURE 878

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGGKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFFLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACECLLYRGDVVPKDVNAAIATIKTKRSIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLKYAKRAVHVHYVGEGMEEGEFSEAREDMAALEKDYEYVGVDSVEGEGESEEGEE
Y

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FIGURE 879

GGCACGAGGCAGTAGCTCCCGTTGCGGCGGCACCCGTGGCAGCCCTGGCGGACGCAGGAGCGATGGCAGCGACCG
ATATAGCTCGCCAGGTGGGTGAAGGTTGCCGAACGTGTCCCCCTGGCTGGACATGTGGGGTTTGACAGCTTGCCTG
ACCAGCTGGTGAATAAGTCCGTCAGCCAGGGCTTCTGCTTCAACATCCTGTGCGTGGGAGAGACAGGTTTGGGCA
AGTCCACCCTCATGGACACCCTGTTCAACACCAAATTCGAAGGGGAGCCAGCCACCCACACACAGCCGGGTGTCC
AGCTCCAGTCTAATACCTATGACCTCCAAGAGAGCAACGTGAGGCTAAAGCTCACGATCGTTAGCACAGTTGGCT
TTGGGGACCAGATCAACAAAGAGGACAGCTACAAGCCTATCGTGGAATTCATCGATGCACAATTCGAGGCCTACC
TGCAGGAAGAGCTAAAGATCCGAAGAGTGCTACACACCTACCATGACTCCCGAATCCATGTCTGCTTGTATTTCA
TTGCCCCACGGGTCATTCCCTGAAGTCTCTGGACCTAGTGACTATGAAGAAGCTGGACAGTAAGGTGAACATCA
TCCCCATCATTGCCAAAGCAGATGCCATTTGAAGAGTGAGCTAACAAAGTTCAAAATCAAAATCACCAGCGAGC
TTGTTCAGCAACGGAGTCCAGATCTATCAGTTTCCTACAGATGATGAGTCGGTGGCAGAGATCAATGGAACCATGA
ACGCCCACCTGCCGTTTGCTGTCTATTGGCAGCACAGAAGAACTGAAGATAGGCAACAAGATGATGAGGGCGCGGC
AGTATCCTTGGGGCACTGTGCAGGTTGAAAACGAGGCCCCACTGCGACTTTGTGAAGCTGCGGGAGATGCTGATTC
GGGTCAACATGGAGGATCTGCGGGAGCAGACCCACACCCGGCACTATGAGCTGTATCGCCGCTGTAAGCTGGAGG
AGATGGGCTTCAAGGACACCGACCCTGACAGCAAACCCCTTCAGTTTACAGGAGACATATGAGGCCAAAAGGAACG
AGTTCTTAGGGGAACCTCCAGAAAAAAGAAGAGGAGATGAGACAGATGTTTCGTCCAGCGAGTCAAGAGAGAAAG
CGGAGCTCAAAGAGGCAGAGAAAGAGCTGCACGAGAAGTTTGACCGTCTGAAGAACTGCACCAGGACGAGAAGA
AGAACTGGAGGATAAGAAGAAATCCCTGGATGATGAAGTGAATGCTTTCAAGCAAAGAAAAGACGGCGGCTGAGC
TGCTCCAGTCCCAGGGCTCCCAGGCTGGAGGCTCACAGACTCTGAAGAGAGACAAAAGAGAAAGAAAACTTTTTTT
AATCTTGTCTTCAGCAGCTGCACTAAGTCTAAAGGAGAAGACTGCCATTATAGAAGAGTTAGGGTTCCATATTGT
CTCAAATCAGAAATCAACCAATTTCTCTCCCTCAAACCTGCAAGCACACACACATACACCACACCACTCAACAA
GTGTTTCATGTGTCCCTGTGTCCAGGCAAGAAGCTCTCTTCTGACTCACATGGTATTTTAAATGGAAGTGTCTTG
TCCTAACTAACAAGGCAGGAAAAGAACCATCAGAGCTGGAAAATGGACGAAATGTAACCTCAGAGAAACAACTAC
AGGACCACTCACCAAGTGTAAGTGACTGGGGCAGGACACCTCAGCTGTGGGTATGAAAGTACTGTTCTGTTCAC
AAGGTTTTGTTTGAGTTTTATGTTTTCTTTTAAACATTTCTCTGGTTTCGATGGGTTGACTGTCTACAGCCACTG
TTAAACATTTCTGAATATGCAAGAGAAAGTCAAGTGACATTTGTATCTTCTTCAGCATTGCGAGACCTTCTATAG
ATTCCAGCAAAGGGGAAAATGTATCCACTATCTAACACTTAGGTAGAGAAGGGAGGGGGTTAAGCTTAGTGAG
GGCAAATTAATCCATTCCACCTCCGAGACCAGTTAGGGTTTTGAGAGAGGTTTCTGCTCAACCTGGGATCTGG
AGGGAGAGCTTTGATGTTGGTAAATCTGCCTTGAATTCATTGGTTTTAACTTGCATCAAAATACCATGTGAGTGTG
CTCATTCTCATATATCCCTACCACCATCACCACCATCTGCTGTTTCAAGTGTCTCTTGAGAGAGCCTCTTTGCAT
GTTTTCCAGAATCTGTGTGTGTTTTCTTTCTTCTCCTTTGTTCTTTTTGCTCAAAGGTGTGACCAGTCATTGC
CCCTCTGGGGCTTTTATTCTCCAGGAGAAACATCCCAGAACCAGCACTGTTTAGCCTGATACCTTTCTAATGTCC
ATGTCAATTTTCAATAAAATTCAAAGAAATGCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 880

MAATDIARQVGE GCRTVPLAGHVGFDSLDPQLVNKSVSQGFCFNILCVGETGLGKSTLMDTLFNTKFEGEPATHT
QPGVQLQSN TYDLQESNVRLKLTIVSTVGFGDQINKEDSYKPIVEFIDAQFEAYLQEELKIRRVLHTYHDSRIHV
CLYFIAPTGHSLKSLDLVTMKKLDSKVNIIPIIAKADAISKSELT KFKIKITSELVSNQVQIYQFPTDDESVAEI
NGTMNAHL PFAVIGSTEELKIGNKMMRARQYPWGT VQVENEAHCDFVKLREMLIRVNMEDLREQTHTRHYEL YRR
CKLEEMGFKDTDPDSKPFSLQETYEAKRNEFLGELQKKEEEMRQMFVQRVKEKEAELKEAEKELHEKFDRLKKLH
QDEKKKLEDKKKSLDDEVNAFKQRKTAAELLQSQGSQAGGSQTLKRDKEKKNFF

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FIGURE 881

ATCAGCGAGGGATTACGGCGAAATGAGACTGTTTCGTGAGTGATGGCGTCCCGGGTTGCTTGCCGGTGCTGGCCG
CCGCCGGGAGAGCCCAGGGGAGAGCAGAGGTGCTCATCAGCACTGTAGGCCCGGAAGATTGTGTGGTCCCGTTCC
TGACCCGGCCTAAGGTCCCTGTCTTGCAGCTGGATAGCGGCAACTACCTCTTCTCCACTAGTGCAATCTGCCGAT
ATTTTTTTTTTGTATCTGGCTGGGAGCAAGATGACCTACTAACCAGTGGCTGGAATGGGAAGCGACAGAGCTGC
AGCCAGCTTTGTCTGCTGCCCTGTACTATTTAGTGGTCCAAGGCAAGAAGGGGGAAGATGTTCTTGGTTTCAGTGC
GGAGAGCCCTGACTCACATTGACCACAGCTTGAGTCGTCAGAAGTGTCTTTCTGGCTGGGGAGACAGAATCTC
TAGCCGACATTGTTTTGTGGGGAGCCCTATACCCATTACTGCAAGATCCCGCCTACCTCCCTGAGGAGCTGAGTG
CCCTGCACAGCTGGTTCCAGACACTGAGTACCCAGGAACCATGTGAGCGAGCTGCAGAGACTGTACTGAAACAGC
AAGGTGTCCTGGCTCTCCGGCCTTACCTCCAAAAGCAGCCCCAGCCCCGCTGAGGGAAGGGCTGTCACCA
ATGAGCCTGAGGAGGAGGAGCTGGCTACCCTATCTGAGGAGGAGATTGCTATGGCTGTTACTGCTTGGGAGAAGG
GCCTAGAAAGTTTGGCCCCGCTGCGGCCCCAGCAGAATCCAGTGTGCTGTGGCTGGAGAAAGGAATGTGCTCA
TCACCAGTGCCTCCCTTACGTCAACAATGTCCCCACCTTGGGAACATCATTGGTTGTGTGCTCAGTGCCGATG
TCTTTGCCAGGTACTCTCGCCTCCGCCAGTGGAAACACCCCTCTATCTGTGTGGGACAGATGAGTATGGTACAGCAA
CAGAGACCAAGGCTCTGGAGGAGGGACTAACCCCCAGGAGATCTGCGACAAGTACCACATCATCCATGCTGACA
TCTACCGCTGGTTTAAACATTTTCGTTTGATATTTTTTGGTCGCACCACCCTCCACAGCAGACCAAAATCACCAGG
ACATTTTCCAGCAGTTGCTGAAACGAGGTTTTTGTGCTGCAAGATACTGTGGAGCAACTGCGATGTGAGCACTGTG
CTCGCTTCTGGCTGACCGCTTTCGTGGAGGGCGTGTGTCCTTCTGTGGCTATGAGGAGGCTCGGGGTGACCACT
GTGACAAGTGTGGCAAGCTCATCAATGCTGTGAGCTTAAGAAGCCTCAGTGTAAAGTCTGCCGATCATGCCCTG
TGGTGCAGTCGAGCCAGCACCTGTTTCTGGACCTGCCTAAGCTGGAGAAGCGACTGGAGGAGTGGTTGGGGAGGA
CATTGCCTGGCAGTGACTGGACACCCAATGCCAGTTTATCACCCGTTCTTGGCTTCGGGATGGCCTCAAGCCAC
GCTGCATAACCCGAGACCTCAATGGGGAACCCCTGTACCCTTAGAAGGTTTTGAAGACAAGGTATTCTATGTCT
GGTTTGATGCCACTATTGGCTATCTGTCCATCACAGCCAACTACACAGACCAGTGGGAGAGATGGTGAAGAACC
CAGAGCAAGTGGACCTGTATCAGTTTCATGGCCAAAGACAATGTTTCCTTTCCATAGCTTAGTCTTTCTTGTCTCAG
CCCTAGGAGCTGAGGATAACTATACCTTGGTCAGCCACCTCATTGCTACAGAGTACCTGAACTATGAGGATGGGA
AATTCTCTAAGAGCCGCGGTGTGGGAGTGTGTTGGGGACATGGCCCAGGACACGGGGATCCCTGCTGACATCTGGC
GCTTCTATCTGCTGTACATTGCGCCTGAGGGCCAGGACAGTGCTTTCTCCTGGACGGACCTGCTGCTGAAGAATA
ATTCTGAGCTGCTTAACAACCTGGGCAACTTCATCAACAGAGCTGGGATGTTTGTGTCTAAGTTCTTTGGGGGCT
ATGTGCCTGAGATGGTGTCTACCCCTGATGATCAGCGCCTGCTGGCCCATGTACCCCTGGAGCTCCAGCACTATC
ACCAGTACTTGAGAAGGTTTCGGATCCGGGATGCCTTGCGCAGTATCCTCACCATATCTCGACATGGCAACCAAT
ATATTGAGGTGAATGAGCCCTGGAAGCGGATTAAAGGCAGTGAGGCTGACAGGCAACGGGCAGGAACAGTGACTG
GCTTGGCAGTGAATATAGCTGCCTTGCTCTCTGTGTCATGCTTCAGCCTTACATGCCCACGGTTAGTGCCACAATCC
AGGCCCAGCTGCAGCTCCCACCTCCAGCCTGCAGTATCCTGCTGACAACTTCTGTGTACCTTACCAGCAGGAC
ACCAGATTGGCACAGTCAGTCCCTTGTTCCAAAAATTGGAATAAGGAGATTGAAAGTTTAAAGGCAGCGCTTTG
GAGGGGGCCAGGCAAAAACGTCCCCGAAGCCAGCAGTTGTAGAGACTGTTACAACAGCCAAGCCACAGCAGATAC
AAGCGCTGATGGATGAAGTGACAAAACAAGGAAACATTGTCCGAGAACTGAAAGCACAAAAGGCAGACAAGAACG
AGGTTGCTGCGGAGGTGGCGAAACTCTTGGATCTAAAGAAAACAGTTGGCTGTAGCTGAGGGGAAACCCCTGAAG
CCCCTAAAGGCAAGAAGAAAAAGTAAAGACCTTGGCTCATAGAAAGTCACTTTAATAGATAGGGACAGTAATAA
ATAAATGTACAATCTCTATA

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FIGURE 882

MRLFVSDGVPGLPVLAAAGRARGRAEVLISTVGPEDCVVPFLTRPKVPVLQLDSGNYLFSTSAICRYFFLLSGW
EQDDL TNQWLEWEATELQPALSAALYYLVVQGKKGEDVLGSVRRAL THIDHSLSRQNC PFLAGETESLADIVLWG
ALYPLLQDPAYLPEELSALHSWFQTLSTQEP CQRAAETVLKQQGV LALRPYLQKQPQSPAEGRAVTNEPEEEEL
ATLSEEEIAMAVTAWEGLES LPPLRPQONPVL PVAGERNVLITSALPYVNNVPHLGNIIGCVLSADVFARYSRL
RQWNTLYLCGTDEYGTATETKALEEGLTPQEICDKYHIIHADIYRWFNISFDIFGRTTTTPQQT KITQDIFQQLLK
RGFVLQDTVEQLRCEHCARFLADRFVEGVCPFCGYEEARGDQCDKCGKLINAVELKKPQCKVCRSCPVVQSSQHL
FLDLPKLEKRLEEWLGRTLPGSDWTPNAQFITRSWLRDGLKPRCITRDLKWGTPVPLEGFEDKV FYVWFDATIGY
LSITANYTDQWERWWKNPEQVDLYQFMAKDNVPFHSLVFPSCSALGAEDNYTLVSHLIATEYLN YEDGKFSKSRGV
GVFGDMAQDTGIPADIWRFYLLYIRPEGQDSAFSWTDLLLKNNSELLNNLGNF INRAGMFVSKFFGGYVPEMVL T
PDDQRLLAHVTTLELQHYHQLLEKVRIRDALRSILTISR HGNQYIQVNEPWKRIKGSEADRQRAGTVTGLAVNIAA
LLSVMLQPYMPTVSATIQAQLQLPPPACSILLTNFLCTLPAGHQIGTVSPLFQKLENDQIESLRQRFGGGQAKTS
PKPAVVETVTTAKPQQIQALMDEVTKQGNIVRELKAQKADKNEVAAEVAKLLDLKKQLAVAEGKPPEAPKGKKKK

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FIGURE 883

GGCACGAGGCTGCTGTTTGTCTACTTCCTCCTGCTTCCCCGCCGCCGCCGCCCATCATGAGGGAAATCGTGCA
CTTGCAAGGCCGGGCAGTGCGGCAACCAAATCGGCGCCAAGTTTTGGGAGGTGATCAGCGATGAGCACGGCATCGA
CCCCACGGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAACGCATCAACGTGTACTACAATGAGGCCACCGG
CGGCAAGTACGTGCCCCGCCCGTGCTCGTGGATCTGGAGCCCGGCACCATGGACTCCGTGCGCTCGGGGCCCTT
CGGGCAGATCTTCCGGCCGGACAACCTTCGTTTTCGGTGAGAGTGGTGCTGGGAACAACCTGGGCCAAGGGGCACTA
CACAGAAGGCGCGGAGCTGGTGGACTCGGTGCTGGATGTTGTGAGAAAGGAGGCTGAGAGCTGTGACTGCCTGCA
GGGTTTCCAGCTGACCCACTCCCTGGGTGGGGGGACTGGGTCTGGGATGGGTACCCTCCTCATCAGCAAGATCCG
GGAGGAGTACCCAGACAGGATCATGAACACGTTTAGTGTGGTGCCTTCGCCCAAAGTGTGAGACACAGTGGTGGA
GCCCTACAACGCCACCCTCTCAGTCCACCAGCTCGTAGAAAACACAGACGAGACCTACTGCATTGATAACGAAGC
TCTCTACGACATTTGCTTCAGAACCCCTAAAGCTGACCACGCCCACCTATGGTGACCTGAACCACCTGGTGTCTGC
TACCATGAGTGGGGTACCCACCTGCCTGCGCTTCCCAGGCCAGCTCAATGCTGACCTGCGGAAGCTGGCTGTGAA
CATGGTCCCCTTTCCCGGCTGCACTTCTTCATGCCCGGCTTTGCCCACTGACCAGCCGGGGCAGCCAGCAGTA
CCGGGCGCTGACCGTGCCCGAGCTCACCCAGCAGATGTTTGATGCCAAGAACATGATGGCTGCCTGCGACCCCCG
CCATGGCCGCTACCTGACGGTTGCCGCGGTGTTCCAGGGGCCGATGTCCATGAAGGAGGTGGATGAGCAAATGCT
TAATGTCCAAAACAAAACAGCAGCTATTTTGTGAGTGGATCCCCAACAAATGTGAAAACGGCTGTCTGTGACAT
CCCACCTCGGGGGCTAAAAATGTCCGCCACCTTCATTGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCAT
CTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGACGAGAT
GGAGTTCACCGAGGCCGAGAGCAACATGAATGACCTGGTGTCCGAGTACCAGCAGTACCAGGATGCCACAGCCGA
GGAGGAGGGCGAGTTCGAGGAGGAGGCTGAGGAGGAGGTGGCCTAGAGCCTTCAGTCACTGGGGAAAGCAGGGAA
GCAGTGTGAACCTTTTATTCACTCCCAGCCTGTCTGTGGCCTGTCCCACTGTGTGCACTTGCTGTTTTCCCTGT
CCACATCCATGCTGTACAGACACCACCATTAAGCATTTTCATAGTGAIAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 884

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGKYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLOGFQLTHSLGGGTGSGMGT
LISKIREEYPDRIMNTFSVVPSPKVS DTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTP TYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVFPFRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGE GMDMEFTEAESNMNDLVSEYQQYQDATAEEEGEFEEEEEEVA

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FIGURE 885

CAGGAGAAGCTGACCAGCCGCAAGATGGACAGCCGCTGGGGCGGGCGCAGCGAGTCCATCAATGTGACCCCTCAAC
GTGGAGCAGGCAGCCTACACCCGTGATGCCCTGGCCAAGGGGCTCTATGCCCGCCTCTTCGACTTCCTCGTGAG
GCCATCAACCGTGCTATGCAGAAACCCAGGAAGAGTACAGCATCGGTGTGCTGGACATTTACGGCTTCGAGATC
TTCCAGAAAAATGGCTTCGAGCAGTTTTGCATCAACTTCGTCAATGAGAAGCTGCAGCAAATCTTTATCGAACTT
ACCCTGAAGGCCGAGCAGGAGGAGTATGTGCAGGAAGGCATCCGCTGGACTCCAATCCAGTACTTCAACAACAAG
GTCGTCTGTGACCTCATCGAAAACAAGCTGAGCCCCCAGGCATCATGAGCGTCTTGAGCAGCGTGTGCGCCACC
ATGCACGCCACGGGCGGGGAGCAGACCAGACACTGCTGCAGAAGCTGCAGGCGGCTGTGGGGACCCACGAGCAT
TTCAACAGCTGGAGCGCCGGCTTCGTTCATCCACCACTACGCTGGCAAGGTCTCCTACGACGTACAGCGGCTTCTGC
GAGAGGAACCGAGACGTTCTTCTCCGACCTCATAGAGCTGATGCAGTCCAGTGACCAGGCCTTCCTCCGGATG
CTCTTCCCCGAGAAGCTGGATGGAGACAAGAAGGGGCGCCCCAGCACCGCCGGCTCCAAGATCAAGAAACAAGCC
AACGACCTGGTGGCCACACTGATGAGGTGCACACCCCACTACATCCGCTGCATCAAACCCAACGAGACCAAGCAC
GCCCAGACTGGGAGGAGAACAGAGTCCAGCACCAGGTGGAATACCTGGGCCTGAAGGAAAACATCAGGGTGCGC
AGAGCCGGCTTCGCCTACCGCCGCCAGTTCCGCAAATTCCTGCAGAGGTATGCCATTCTGACCCCCGAGACGTGG
CCGCGGTGGCGTGGGGACGAACGCCAGGGCGTCCAGCACCTGCTTCGGGCGGTCAACATGGAGCCCCACCAGTAC
CAGATGGGGAGACCAAGGTCTTTGTCAAGAACCCAGAGTCGCTTTTCTCCTGGAGGAGGTGCGAGAGCGAAAG
TTCGATGGCTTTGCCCGAACCATCCAGAAGGCCTGGCGGCGCCACGTGGCTGTCCGGAAGTACGAGGAGATGCGG
GAGGAAGCTTCCAACATCCTGCTGAACAAGAAGGAGCGGAGGCGCAACAGCATCAATCGGAACCTTCGTGCGGGAC
TACCTGGGGCTGGAGGAGCGGCCGAGCTGCGTCAGTTTCCTGGGCAAGAAGGAGCGGGTGGACTTCGCCGATTTCG
GTCACCAAGTACGACCGCCGCTTCAAGCCCATCAAGCGGGACTTGATCCTGACGCCCAAGTGTGTGTATGTGATT
GGGCGAGAGAAGATGAAGAAGGGACCTGAGAAAAGTCCAGTGTGTGAAATCTTGAAGAAGAAATTGGACATCCAG
GCTCTGCGGGGGGTCTCCCTCAGCACGCGACAGGACGACTTCTTCATCCTCCAAGAGGATGCCGCCGACAGCTTC
CTGGAGAGCGTCTTCAAGACCGAGTTTGTGAGCCTTCTGTGCAAGCGCTTCGAGGAGGCGACGCGGAGGCCCTG
CCCCCTACCTTCAGCGACACACTACAGTTTCGGGTGAAGAAGGAGGGCTGGGGCGGTGGCGGCACCCGACGCTC
ACCTTCTCCCGCGGCTTCGGCGACTTGGCAGTGCTCAAGGTTGGCGGTGCGACCTCACGGTCAGCGTGGGCGAT
GGGCTGCCCAAGAAGTCCAAGCCTACCGGAAAGGGATTGGCCAAGGGTAAACCTCGGAGGTGCTCCAAGCCCCCT
ACCCGGGCGGCCCTGGCGCCCCCAAGGCATGGATCGAAATGGGGCCCCCTCTGCCACAGGGGGGGGGCCCCC
TGCCCCCTGGAGAAATTCAATTTGGCCCAGGGGGCACCCACAGGCCTCCCCGGCCCTCCGTCCACATCCCTGGGAT
GCCAGCAGACGACCCCGGGCAGTCCGCCCTCAGAGCACAACACAGAATTCCTCAACGTGCCTGACCAGGGGATG
GCCGGCATGCAGAGGAAGCGCAGCGTGGGGCAACGGCCAGTGCCTGTGGGCCGACCCAAGCCCCAGCCTCGGACA
CATGGTCCCAGGTGCCGGGCCCTATACCAGTACGTGGGCCAAGATGTGGACGAGCTGAGCTTCAACGTGAACGAG
GTCATTGAGATCCTCATGGAAGATCCCTCGGGCTGGTGAAGGGCCGGCTTCACGGCCAGGAGGGCCTTTTCCCA
GGAACTACGTGGAGAAGATCTGAGCTGGGCCCTGGGATACTGCCTTCTCTTTCGCCCGCCTATCTGCCTGCCGG
CCTGGTGGGGAGCCAGGCCCTGCCAATGAAAGCCTCGTTTACCTGGGCTGCAATAGCCTAAAAGTCCAATCCTTT
GGCCTCCAGTCTTGGCCAGGCCCTGGGTCAACAGGTCACTGGTGCAGCCCCCGCCCTGGGCCCTGGTTTTCTCT
CCAACATCACACCTGCTGCCCATTTGTCCAAAAGTGTGTGTGTCAAAGGGGACTAACAGCAGAATTTACCTCCCAA
CTGCCATGTGATTAAGAAATGGGTCTTGAGTCTGTGCTGTGGCAAAGTTCCAGGCACAGTTGGGGAGGGGGGG
CCGGAATCCGC

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FIGURE 886

CGGAGCCAGCGTGGGAGGCCGCTGCCGTCGCGCGCCTTGGTTTTTCTGTTCCTTTTTTTTTTTTTTTTTAACTT
CCTGCCTATCACACGCAGCCATCAGCCCACAAAGACATCACTACCAACGCGGGCCCCCTGCACCCATACTGGCCT
CAGCACCTAAGACTGGACAACTTTGTACCTAATGACCGCCCCACCTGGCATATACTGGCTGGCCTCTTCTCTGTC
ACAGGGGTCTTAGTCGTGACCACATGGCTGTTGTCAGGTCGTGCTGCGGTTGTCCCATTGGGGACTTGGCGGGCGA
CTGTCCCTGTGCTGGTTTGCAGTGTGTGGGTTTCATTACCTGGTGATCGAGGGCTGGTTTCGTTCTCTACTACGAA
GACCTGCTTGGAGACCAAGCCTTCTTATCTCAACTCTGGAAGAGTATGCCAAGGGAGACAGCCGATACATCCTG
GGTGACAACTTCACAGTGTGCATGGAACCATCACAGCTTGCCTGTGGGGACCACTCAGCCTGTGGGTGGTGATC
GCCTTTCTCCGCCAGCATCCCCTCCGCTTCATTCTACAGCTTGTGGTCTCTGTGGGCCAGATCTATGGGGATGTG
CTCTACTTCCTGACAGAGCACCGCGACGGATTCCAGCACGGAGAGCTGGGCCACCCTCTCTACTTCTGGTTTTAC
TTTGTCTTCATGAATGCCCTGTGGCTGGTGCTGCCTGGAGTCCTTGTGCTTGATGCTGTGAAGCACCTCACTCAT
GCCCAGAGCACGCTGGATGCCAAGGCCACAAAAGCCAAGAGCAAGAAGAACTAGAGGAGTGGTGGACCAGGCTCGA
ACACTGGCCGAGGAGGAGCTCTCTGCCTGCCAGAAGAGTCTAGTCCTGCTCCACAGTTTGGAGGGACAAAGCTA
ATTGATCTGTCCACTCAGGCTCATGGGCAGGCACAAGAAGGGGAATAAAGGGGCTGTGTGAAGGCACTGCTGGG
AGCCATTAGAACACAGATACAAGAGAAGCCAGGAGGTCTATGATGGTGACGATTTTTTAAATCAGGAAATAAAAG
ATCTTGACTCTAAAAAAAAAAAAA

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FIGURE 887

MTTNAGPLHPYWPQHRLRLDNFVPNDREPTWHILAGLFSVTGVLVTTWLLSGRAAVVPLGTWRRLSLCWFAVCGFI
HLVIEGWFLVYYEDLLGDQAFSLQLWKEYAKGDSRYILGDNFTVCMETITACLWGPLSLWVVIAFLRQHPLRFIL
QLVVSVGQIYGDVLYFLTEHRDGFQHGELGHPLYFWFYFVFMNALWLVLPGVLVLDAVKHLTHAQSTLDAKATKA
KSKKN

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FIGURE 888

GAATTCGGCACGAGGATGACGGAGCCGGGCGCCTCTCCCGAGGACCCTTGGGTCAAGGTGGAGTATGCCTACAGC
GACAACAGCCTGGACCCCGGGCTTTTTGTAGAAAGCACCCGCAAGGGGAGTGTAGTGTCCAGAGCTAATAGCATC
GGTTCCACCAGTGCCTCTTCTGTCCCCAACACAGATGATGAGGACAGTGATTACCACCAGGAGGCCTACAAGGAG
TCCTACAAAGACCGGCGGGCGGCGCACACACTCAGGCTGAGCAGAAGAGGAGGGACGCCATCAAGAGAGGCTAT
GATGACCTTCAGACCATCGTCCCCACTTGCCAGCAGCAGGACTTCTCCATTGGCTCCCAAAAGCTCAGCAAAGCC
ATCGTTCTACAAAAGACCATTGACTACATTCACTTTTTGCACAAGGAGAAGAAAAAGCAGGAGGAGGAGGTGTCC
ACGTTACGCAAGGATGTACCGCCCTAAAGATCATGAAAGTGAAGTATGAGCAGATTGTGAAGGCACACCAGGAC
AACCCCATGAAGGGGAGGACCAGGTCTCTGACCAGGTCAAGTTCAACGTGTTTCAAGGCATCATGGTTTCCCTG
TTCCAGTCCTTCAATGCCTCCATCTCAGTGGCCAGCTTCCAGGAGCTGTCAGCGTGTGTCTTCAGCTGGATCGAG
GAGCACTGTAAGCCTCAGACCCTGCGGGAGATTGTGATTGGCGTCTGACCAATTGAAAAACCAGCTTTACTTGA

CCGTTCTTGGAACCTGGAGAACAGCCAACAAGAGGCCCTTGAATCTCTACGTGGCCACTGAACTGCTGGGCC
GGGAGACTGGTCTACAACACCACACACTGGACAGCTGGTCTCTACTTGGTGTGTGGTTTCTCCAGCCCCATTTT
CTCTACAGCGGAGCCGCGGTGTGTGTTGTGTGAAAGCTTCTGATTAATTTATTATATTGACGATAAACTCAAAC
CTACCCAGCCTTCCCCCACTCCATGGAAGTCCTTGGGATGGGCGTCTGCTCTGGACACCCCAAAGAGCTCCTGC
CCTCTCAGCCCTTTATTCAAGCCTCAGATTTCTGCTCATGATCTACATAGATTTGGAACTGTTTCTCTGTG
TGGTCTCTTGGGCAACATTTGTGGCCCAAGTTTGGGCAACATTTGGCCCAAGTTTGGGCATTGTGGGAGTAGCTG
TATGGGAGAAAAAGAGTAAGAGGAAATATTCCACAGCCATGAAGGGTGAAAGGGCACCTTGTGCCTAGACTAGG
GCTGGCTGGTCAGTCCCAGGTGAGGACAAGGGCTTTCTGGCCATCTCAGGGAGGGGGCACAGGTTCTCCCTC
ACCCATATTCCATCACCTTCCTCCTCTGCTCTGGGTGGTAAGGGAAGCCCTCCCGGTTCCCACAGGCTATGATG
CTGCATGGCAGAGGCAGGTATAACACAGCACTACATATTGGAAATTTTTTATTTTCTAAATACCAATGCAGTTT
TGCTACGGTTACAATTTTGAATATTAAGTGAAGCCTCAAATCACCCTTTCTGTCAAGCATATCTTGGCCTCTCC
CATGTCTCAGTGTGCTGCAATTTCTCCAGGACTTGGGGGTGGGGTGAAAAGCGTACAAAAGATACTTAAAGG
GCTCCTGGGGTACACAAGCCCAGCAGGTCTGAGTGAAGCCGTGGGCCCTCCAAATGCTCGTTTTATAGCAACCT
CTCTCTACCCTAGTTCTCAAATTAAGTCTGCTTCTCAGGTTTGATATCTGGCAGGTTTGACTATCCAGAGG
AAATTAAATATTTTTATATAAAATTAATTAATAAATATTGCCAATGCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 889

MTEPGASPEDPWVKVEYAYS DNSLDPGLFVESTRKGSVVSRANSIGSTSASSVPNTDDESDYHQEAYKESYKDR
RRRAHTQAEQKRRDAIKRGYDDLQTIVPTCQQQDFSIGSQKLSKAIVLQKTIDYIQFLHKEKKKQEEEVSTLRKD
VTALKIMKVNYEQIVKAHQDNPHGEDQVSDQVKFNVFQGIMVSLFQSFNASISVASFQELSACVFSWIEEHCKP
QTLREIVIGVLHQLKNQLY

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FIGURE 890

ATGGTGAAAAATGACAAAGTCCAAAACCTTTCCAAGCGTATCTGCCGAACTGTCACCGAACGTACAGCTGTATCCAC
TGCAGAGCACACCTGGCCAATCATGACGAGCTCATCTCCAAGTCCTTTCAGGGGAGCCAGGGACGCGCCTACCTC
TTCAATTCCGTGGTGAACGTGGGCTGCGGCCCTGCAGAGGAGAGGGTCCTTCTCACCGGGCTGCATGCGGTTGCC
GACATCTACTGCGAGAAGTGAAGACCACGCTCGGGTGGAATACGAGCATGCCTTTGAGAGCAGTCAGAAATAT
AAGGAAGGAAAATTCATCATTGAGCTTGCTCATATGATCAAAGACAATGGCTGGGAGTAA

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FIGURE 891

MVKMTKSKTFQAYLPNCHRTYSCIHCRAHLANHDELISKSFQGSQGRAYLFNSVVNVGCGPAEERVLLTGLHAVA
DIYCENCKTTLGWKYEHAFAESSQKYKEGKFIIELAHMIKDNGWE

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FIGURE 892

GCGGCCGCCGTGGCCAGGCAACCTATGGGTACCACCGGGTTCTCGCGGGTCTTGCGAACGAACTTTTCTTGAAA
CTCTCTGGATTCTGTAAACAGTGGGGCTCAGCCCCCTCAATGACTGGAGGCTTCGATGGTTCAAAGGGGACCTCC
GGAATCACAGGGCCGGGAGTCGCCATGTCCGGGCCACAGCAGCAGGAGAAAATCGGGACTCCGACCTCAGCCTCC
CGGTGAAGGTCATGAAAGGGGCGGGGAAACGAATAAATTGAGCCTTGACGCAGGCGCAAATGCTCGTTGCATCC
TGGGAGTCGTAGTGCTCAGCACGGTAGTGCTACAAAAGGACTACATTTCCCCAAATGCCCGCAAAGCCTTGTCGA
CGCCTTCCGGAAGGAGTTTGTACACGAGGTCTGAGAGACAGAGGCAGCGTGTGAGCTGCTGGTGCGGTGGTC
AGCGCGCATGCCCAAGGCCAAGGGCAAACCCGGAGGCAGAAGTTTGTTACAGTGTCAACCGAAAGCGTCTGAAC
CGGAATGCTCGACGGAAGGCAGCGCGCGGAATCGAATGCTCCACATCCGACATGCCTGGGACCACGCTAAATCG
GTACGGCAGAACCTGGCCGAGATGGGGTTGGCTGTGGACCCCAACAGGGCGGTGCCCTCCGTAAGAGAAAGGTG
AAGGCCATGGAGGTGGACATAGAGGAGAGGCCTAAAGAGCTTGACGGAAGCCCTATGTGCTGAATGACCTGGAG
GCAGAAAGCCAGCCTTCCAGAAAAGAAAGGAAATACTCTGTCTCGGGACCTCATTGACTATGTACGCTACATGGTA
GAGAACCACGGGGAGGACTATAAGGCCATGGCCCGTGATGAGAAGAATTACTATCAAGATACCCAAAAACAGATT
CGGAGTAAGATCAACGCTCTATAAACGCTTTTACCCAGCAGAGTGGCAAGACTTCCTCGATTCTTGCAGAAGAGG
AAGATGGAGGTGGAGTAAGTGGTTTACATCACAGCTGCCCCAGGCTGAGGCGTCCCCCGGACCAGTGAAGCTGGA
GCCAGGGTGTAAGGCAAGGAGGTGCTGTGTGGCTCCAGAGGGGCTGGCCAGGTCCCATGGAATCAGAAGGTTACA
CACACACGTGCACACTCCCCGCTCTGGGGAAGGAACTGTTCTCAGAGGCTCCAATTTATATTCTGCGGGGTTT
ACGGAAGCCAGAACCTGCTGTTTTCAGGGTGGGTGATGTAAATATAGTGTGTACATAATAAGCAAATATATT
TTAAA

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FIGURE 893

MPKAKGKTRRQKFGYSVNRKRLNRNARRKAARGIECSHIRHAWDHAKSVRQNLAEMLAVDPNRAVPLRKRKVK
MEVDIEERPKELVKPYVLNDLEAEASLPEKKGNTLSRDLIDYVRYMVENHGEDYKAMARDEKNYYQDTPKQIRS
KINVYKRFYPAEWQDFLDSLQKRKMEVE

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FIGURE 894

GGAATAGGTTAGTTTCAGACAAGCCTGCTTGCCGGAGCTCAGCAGACACCAGGCCTTCCGGGCAGGCCTGGCCCA
CCGTGGGCCTCAGAGCTGCTGCTGGGGCATTGAGAACCGGCTCTCCATTGGCATTGGGACCAGAGACCCCGCAAG
TGGCCTGTTTGCTGACATCCACCTGTACGTCCCCAGGTTTCGGGAGGCCAGGGGCGATGCCAGACCCGCGG
CGCACCTGCCCTTCTTCTACGGCAGCATCTCGCGTGCCGAGGCCAGGAGCACCTGAAGCTGGCGGGCATGGCGG
ACGGGCTCTTCTGCTGCGCCAGTGCCTGCGCTCGCTGGGCGGCTATGTGCTGTGCTCGTGCACGATGTGCGCT
TCCACCACTTTCCCATCGAGCGCCAGCTCAACGGCACCTACGCCATTGCCGGCGGCAAAGCGCACTGTGGACCGG
CAGAGCTCTGCGAGTTCTACTGCGCGGACCCCGACGGGCTGCCCTGCAACCTGCGCAAGCCGTGCAACCGGCCGT
CGGGCCTCGAGCCGACGCCGGGGTCTTCGACTGCCTGCGAGACGCCATGGTGCGTGACTACGTGCGCCAGACGT
GGAAGCTGGAGGGCGAGGCCCTGGAGCAGGCCATCATCAGCCAGGCCCGCAGGTGGAGAAGCTCATTGCTACGA
CGGCCCACGAGCGGATGCCCTGGTACCACAGCAGCCTGACGCGTGAGGAGGCCGAGCGCAAACCTTTACTCTGGGG
CGCAGACCGACGGCAAGTTCTGCTGAGGCCGCGGAAGGAGCAGGGCACATACGCCCTGTCCCTCATCTATGGGA
AGACGGTGTACCACTACCTCATCAGCCAAGACAAGGCGGGCAAGTACTGCATTCCCAGGGCACCAAGTTTGACA
CGCTCTGGCAGCTGGTGGAGTATCTGAAGCTGAAGGCGGACGGGCTCATCTACTGCCTGAAGGAGGCCCTGCCCA
ACAGCAGTGCCAGCAACGCCTCAGGGGCTGCTGCTCCACACTCCCAGCCACCCATCCACGTTGACTCATCTC
AGAGACGAATCGACACCCTCAACTCAGATGGATACACCCTGAGCCAGCACGCATAACGTCCCCAGACAAACCGC
GGCCGATGCCCATGGACACGAGCGTGTATGAGAGCCCCTACAGCGACCCAGAGGAGCTCAAGGACAAGAAGCTCT
TCCTGAAGCGCGATAACCTCCTCATAGCTGACATTGAACTTGGCTGCGGCAACTTTGGCTCAGTGCGCCAGGGCG
TGTACCGCATGCGCAAGAAGCAGATCGACGTGGCCATCAAGGTGCTGAAGCAGGGCACGGAGAAGGCAGACACGG
AAGAGATGATGCGCGAGGCGCAGATCATGCACCAGCTGGACAACCCCTACATCGTGC GGCTCATTGGCGTCTGCC
AGGCCGAGGCCCTCATGCTGGTCATGGAGATGGCTGGGGGCGGGCCGCTGCACAAGTTCTGGTCCGCAAGAGGG
AGGAGATCCCTGTGAGCAATGTGGCCGAGCTGCTGCACCAGGTGTCCATGGGGATGAAGTACCTGGAGGAGAAGA
ACTTTGTGCACCGTGACCTGGCGGCCCGCAACGTCCTGCTGGTTAACC GGCACTACGCCAAGATCAGCGACTTTG
GCCTCTCCAAAGCACTGGGTGCCGACGACAGCTACTACACTGCCCCTCAGCAGGGAAGTGGCCGCTCAAGTGGT
ACGCACCCGAATGCATCAACTTCCGCAAGTTCTCCAGCCGAGCGATGTCTGGAGCTATGGGGTCAACATGTGGG
AGGCCTTGTCCTACGGCCAGAAGCCCTACAAGAAGATGAAAGGGCCGAGGTCATGGCCTTCATCGAGCAGGGCA
AGCGGATGGAGTGCCACCAGAGTGTCCACCCGAAGTGTACGCACTCATGAGTGAAGTGTGGATCTACAAGTGGG
AGGATCGCCCCGACTTCTGACCGTGGAGCAGCGCATGCGAGCCTGTTACTACAGCCTGGCCAGCAAGGTGGAAG
GGCCCCCAGGCAGCACACAGAAGGCTGAGGCTGCCTGTGCCTGAGCTCCCCTGCCCAGGGGAGCCCTCCACGCC
GGCTCTTCCCCACCCTCAGCCCCACCCAGGTCCTGCAGTCTGGCTGAGCCCTGCTTGGTTGTCTCCACACACAG
CTGGGCTGTGGTAGGGGGTGTCTCAGGCCACACGGCCCTTGCAATTGCCTGCCTGGCCCCCTGTCTCTCTGGCTG
GGGAGCAGGGAGGTCCGGGAGGGTGC GGCTGTGCAGCCTGTCTGGGCTGGTGGCTCCCGGAGGGCCCTGAGCTG
AGGGCATTGCTTACACGGATGCCTTCCCTGGGCCCTGACATTGGAGCCTGGGCATCCTCAGGTGGTCAGGCGTA
GATCACCAGAATAAACCCAGCTTCCCTCTTGAAAAAAAAAAAAAAAAAAAAACC

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FIGURE 895

ACACGGACCAAGGAGTCTAACACGTGCGCGAGTCGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAGGTGAA
GGCCGGCGCGCTCGCCGGCCGAGGTGGGATCCCGAGGCCCTCTCCAGTCCGCCGAGGGCGCACCACCGGCCCGTCT
CGCCCGCCGCGCCGGGGAGGTGGAGCACGAGCGCACGTGTTAGGACCCGAAAGATGTTGAAGTATGCCTGGGCAG
GGCGAAGCCAGAGGAACTCTGGTGGAGGTCCGTAGCGGTCTGACGTGCAAATCGGTCTGCCACCTGGGTATA
GGGGCGGGCTCCAGGCGAGGCGGTTCGACGCTCCTGAAAACCTGCGCGCGCGCTCGCGCCACTGCGCCCGGAGCGA
TGAAGATGGTTCGCGCCCTGGACGCGGTTCTACTCCAACAGCTGCTGCTTGTGCTGCCATGTCCGCACCGGCACCA
TCCTGCTCGGCGTCTGGTATCTGATCATCAATGCTGTGGTACTGTTGATTTTATTGAGTGGCCTGGCTGATCCGG
ATCAGTATAAATTTTCAAGTTCTGAACTGGGAGGTGACTTTGAGTTTCATGGATGATGCCAACATGTGCATTGCCA
TTGCGATTTCTCTTCTCATGATCCTGATATGTGCTATGGCTACTTACGGAGCGTACAAGCAACGCGCAGCCTGGA
TCATCCCATTTCTTCTGTTACCAGATCTTTGACTTTGCCCTGAACATGTTGGTTGCAATCACTGTGCTTATTTATC
CAAATCCATTCAGGAATACATACGGCAACTGCCTCCTAATTTTCCCTACAGAGATGATGTATGTCAAGTGAATC
CTACCTGTTTGGTCCTTATTATTCTTCTGTTTATTAGCATTATCTTGACTTTTAAGGGTTACTTGATTAGCTGTG
TTTGAACTGCTACCGATACATCAATGGTAGGAACCTCTGATGTCCTGGTTTATGTTACCAGCAATGACACTA
CGGTGCTGCTACCCCGTATGATGATGCCACTGTGAATGGTGTGCTGCCAAGGAGCCACCGCCACCTTACGTGTCTG
CCTAAAGCCTTCAAGTGGGCGGAGCTGAGGGCAGCAGCTTGACTTTGCAGACATCTGAGCAATAGTTCTGTTATTT
CACTTTTGCCATGAGCCTCTCTGAGCTTGTGTTGCTGAAATGCTACTTTTTAAATTTAGATGTTAGATTGAA
AACTGTAGTTTTCAACATATGCTTTGCTAGAACACTGTGATAGATTAACTGTAGAATTCTTCTGTACGATTGGG
GATATAATGGGCTTCACTAACCTTCCCTAGGCATTGAAACTTCCCCCAAATCTGATGGACCTAGAAGTCTGCTTT
TGTACCTGCTGGGCCCCAAAGTTGGGCATTTTCTCTCTGTTCCCTCTCTTTTGAATGTAAATAAAACCAA
AATAGACAACTTTTCTTCCAGCATTCCAGCATAGAGAACAAACCTTATGGAAACAGGAATGTCAATTGTGTAA
TCATTGTTCTAATTAGGTAAATAGAAGTCCTTATGTATGTGTTACAAGAATTTCCCCCACAACATCCTTTATGAC
TGAAGTTCAATGACAGTTTGTGTTTGGGTGGTAAAGGATTTTCTCCATGGCCTGAATTAAGACCATTAGAAAGCA
CCAGGCCGTGGGAGCAGTGACCATCTGCTGACTGTTCTTGTGGATCTTGTGTCCAGGGACATGGGGTGACATGCC
TCGTATGTGTTAGAGGTGGAATGGATGTGTTTGGCGCTGCATGGGATCTGGTGGCCCTCTTCTCCTGGATTAC
ATCCCCACCCAGGGCCCGCTTTTACTAAGTGTCTGCCCTAGATTGGTTCAAGGAGGTCAATCAACTGACTTTAT
CAAGTGGAATTGGGATATATTTGATATACTTCTGCCTAACACATGGAAAAGGGTTTTCTTTTCCCTGCAAGCTA
CATCTACTGCTTTGAACTTCCAAGTATGTCTAGTCACCTTTTAAATGTAAACATTTTACAGAAAATGAGGATT
GCCTTCCTTGATGCGCTTTTTACCTTGACTACCTGAATTGCAAGGGATTTTATATATTCATATGTTACAAAGT
CAGCAACTCTCCTGTTGGTTTATTATTGAATGTGCTGTAAATTAAGTTGTTTGCAATTAACAAGGTTTGCCCA
CAAAAAAAAAA

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FIGURE 896

MVNYAWAGRSQRKLWWRSVAVLTCKSVVRPGYRGGLQARRSTLLKTCARARATAPGAMKMVAPWTRFYNSCCLC
CHVRTGTILLGVWYLIINAVVLLILLSALADPDQYNFSSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGA
YKQRAAWIIPFFCYQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLIILLFISIILTF
KGYLISCWNCYRYINGRNSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPPPYVSA

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FIGURE 897

GGCACGAGGCCGAGTTGCCGATGCTGTACTTCTCTTTGTTTTGGGCGGCTCGGCCTCTGCAGAGATGTGGGCAGCT
GGTCAGGATGGCCATTTCGGGCTCAGCACAGCAACGCAGCCCAGACTCAGACTGGGGAAGCAAACAGGGGCTGGAC
AGGCCAGGAGAGCCTGTTCGGACAGTGATCCTGAGATGTGGGAGTTGCTGCAGAGGGAGAAGGACAGGCAGTGTCG
TGGCCTGGAGCTCATTGCCTCAGAGAACTTCTGCAGCCGAGCTGCGCTGGAGGCCCTGGGGTCTGTCTGAACAA
CAAGTACTCGGAGGGTTATCCTGGCAAGAGATACTATGGGGGAGCAGAGGTGGTGGATGAAATTGAGCTGCTGTG
CCAGCGCCGGGCCCTTGGAAAGCCTTTGACCTGGATCCTGCACAGTGGGGAGTCAATGTCCAGCCCTACTCCGGGTC
CCCAGCCAACCTGGCCGTCTACACAGCCCTTCTGCAACCTCACGACCGGATCATGGGGCTGGACCTGCCCCGATGG
GGGCCATCTCACCCACGGCTACATGTCTGACGTCAAGCGGATATCAGCCACGTCCATCTTCTTCGAGTCTATGCC
CTATAAGCTCAACCCCAAACCTGGCCTCATTGACTACAACCAGCTGGCACTGACTGCTCGACTTTTCCGGCCACG
GCTCATCATAGCTGGCACCAGCGCCTATGCTCGCCTCATTGACTACGCCCGCATGAGAGAGGTGTGTGATGAAGT
CAAAGCACACCTGCTGGCAGACATGGCCACATCAGTGGCCTGGTGGCTGCCAAGGTGATTCCCTCGCCTTTCAA
GCACGCGGACATCGTCACCACCACTACTCACAAGACTCTTCGAGGGGGCAGGTGAGGGCTCATCTTCTACCGGAA
AGGGGTGAAGGCTGTGGACCCCAAGACTGGCCGGGAGATCCCTTACACATTTGAGGACCGAATCAACTTTGCCGT
GTTCCCATCCCTGCAGGGGGGCCCCACAATCATGCCATTGCTGCAGTAGCTGTGGCCCTAAAGCAGGCCTGCAC
CCCCATGTTCCGGGAGTACTCCCTGCAGGTTCTGAAGAATGCTCGGGCCATGGCAGATGCCCTGCTAGAGCGAGG
CTACTCACTGGTATCAGGTGGTACTGACAACCACCTGGTGCTGGTGGACCTGCGGCCCAAGGGCCTGGATGGAGC
TCGGGCTGAGCGGGTGCTAGAGCTTGTATCCATCACTGCCAACAAGAACACCTGTCCTGGAGACCGAAGTGCCAT
CACACCGGGCGGCCTGCGGCTTGGGGCCCCAGCCTTAACTTCTCGACAGTTCCGTGAGGATGACTTCCGGAGAGT
TGTGGACTTTATAGATGAAGGGGTCAACATTGGCTTAGAGGTGAAGAGCAAGACTGCCAAGCTCCAGGATTTCAA
ATCCTTCCCTGCTTAAGGACTCAGAAACAAGTCAGCGTCTGGCCAACCTCAGGCAACGGGTGGAGCAGTTTGCCAG
GGCCTTCCCCATGCCTGGTTTTGATGAGCATTGAAGGCACCTGGGAAATGAGGCCACAGACTCAAAGTTACTCT
CCTTCCCCCTACCTGGGCCAGTGAAATAGAAAGCCTTCTATTTTTTGGTGCGGGAGGGAAGACCTCTCACTTAG
GGCAAGAGCCAGGTATAGTCTCCCTTCCAGAATTTGTAAGTGAAGATCTTTTCTTTTCTTTTGGTAA
CAAGACTTAGAAGGAGGGGCCAGGCATTTCTGTTTGAACCCCTGTCATGATCACAGTGTGAGAGACGCGTCCTC
TTTCTTGGGGAAGTTGAGGAGTGCCCTTACAGAGCCAGTAGCAGGCAGGGGTGGGTAGGCACCCCTCCTTCTGTTT
TTATCTAATAAAATGCTAACCTGCCCTGAGTTTCCATTACTGTGGGTGGGGTTCCCCTGGGCCAAACAGTGATTT
GTCTCCCTCAATGTGTACACCGCTCCGCTCCCACACCGCTACCACAAGGACCCCGGGGCTGCAGCCTCCTCTT
TCTGTCTCTGATCAGAGCCGACACCAGACGTGATTAGCAGGCGCAGCAAATTCATTTGTTAAATGAAATTGTAT
TTTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 898

MLYFSLFWAARPLQRCGQLVRMAIRAQHSNAAQTQTGEANRGWTGQESLSDSDPEMWELLQREKDRQCRGLELIA
SENFCSRAALEALGSCLNKYSSEGYPGKRYYGGAEVVDEIELLCQRRALEAFDLDPAQWGVNVQPYSGSPANLAV
YTALLQPHDRIMGLDLPDGGHLTHGYMSDVKRISATSIFFESMPYKLNPKTGLIDYNQLALTARLFRPRLIIAGT
SAYARLIDYARMREVCDEVKAHLLADMAHISGLVAAKVIPSFFKHADIVTTTTHKTLRGARSGLIFYRKGVKAVD
PKTGREIPYTFEDRINFVFPISLQGGPHNHAIAAVALKQACTPMFREYSLQVLKNARAMADALLERGYSLVSG
GTDNHLVLVDLRPKGLDGARAERVLELVSITANKNTCPGDRSAITPGGLRLGAPALTSRQFREDDFRVVDFIDE
GVNIGLEVKSKTAKLQDFKSFLDKDSETSQR LANLRQVEQFARAFFPM PGFDEH

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FIGURE 900

MHHNKQATENAKEEVRRLGLLDAYLKTRTFLVGERVTLADITVVCTLLWLYKQVLEPSFRQAFPNTNRWFLTCTI
NQPPQFRAVLGEVKLCEKMAQFDKAKFAETQPKKDTPRKEKGSREEKQKPQAERKEEKAAAAPAPEEEMDECEQAL
AAEPKAKDPFAHLPKSTFVLDEFKRKYSNEDTSLVALPYFWEHFDKDGWSLWYSEYRFPEELTQTFMSCNLITGM
FQRLDKLRKNAFASVILFGTNNSSISGVWVFRGQELAFPLSPDWQVDYESYTWKLDPGSEETQTLVREYFSWE
GAFQHVKGAFNQKIFK

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FIGURE 901A

CAAGCCAATTATGGCTCCCTTTCCCAATGGTAGTTTGTGAATGGCTTTAATTCGCCAGGATCTTATAAAACAAAT
GCTGCTGCTATGAATATGGGTCGACCATTCCAAAAAATCGTGTGAAGCCTCAGTTTAGGTCACTCGGTGGTTCA
GAACACTCAACAGAGGGGCTCTGTATCCTTGGGGGATGGACAGTTGAACAGATATAGTTCAAGAAACTTTCCAGCT
GAACGGCATAACCCACAGTAACCTGGGCATCAGGAGCAAACCTTACCTTCAGAAGGAGACTTCCACTTTGCAGGTG
GAACAGAATGGGGACTATGGTAGGGGCAGGAGAATCTCTTCAGAGGTGCGAAGACGACGAGAAGATGACAGGATC
TCAAGACCTCATCCTTCAACAGCTGAATCAAAGGCTCCAACACCAAAGTTTGACTTATTAGCCTCAAATTTTCCA
CCTTTACCTGGAAGTTCATCAAGAATGCCAGGTGAACCTCGTTTGGAGAATAGGATGTCTGATGTTGTTAAAGGTG
TCTACAAAGAAAAGGATAATGAAGAGTTGACAATTAGTTGCCAGTGCCCTGCAGATGAGCAGACAGAATGCACTT
CTGCCCAGCAACTCAATATGAGTACCAGTTCTCCATGTGCTGCTGAGCTTACTGCATTAAGCACAACTCAGCAAG
AAAAGGATCTAATAGAAGATTCTCTGTTCAGAAGGATGGTCTCAATCAGACAACATACCAGTTTCTCCTCCAA
GTACTACAAAGCCATCGAGGGCAAGTACTGCTTCACCATGTAATAATAACATAAATGCAGCTACAGCTGTGGCTC
TACAGGAACCCCGAAAAGTTAAGTTATGCTGAAGTGTGCCAGAAGCCCCCTAAAGAGCCATCTTCAGTTCTTGTGC
AGCCACTACGGGAACCTTCGCTCCAATGTGGTGTCTCCACCAAAAATGAAGACAATGGAGCTCCTGAGAACTCCG
TTGAGAAACCATGAGAAGCCAGAAGCAAGGGCTAGTAAGGATTATTCTGGCTTCCGAGGCAATATAATCCCCA
GGGGAGCAGCAGGAAAAATCAGGGAACAGAGACGCCAGTTTAGCCATAGGGCTATACCTCAGGGAGTGACTCGAC
GTAATGGCAAAGAGCAATATGTGCCACCCAGATCACCAAAGTAAAAAACAACAACTATTCAAAAACCTTCACTC
TCTTCCCATTAACCTTGAACGTGGCTATATTGAACTGTTTTGGAGGGGAGGGGGTAGCCAGGAAGGAAACAAGA
GAAAGTACGTCCATTTTATTATGGATTTTGGAGTTGTGAGTGATAGGATCCCAAAATTCATCTCTAATGTGGTTT
TTAAATGCTGGAGGATTCCAATCAATATAAATATATATATATATACACACACATATATAAAAAGTATAATTTT
TCTATTTTTGTTTTGGTTTTAATTTGCAGAGATTTGCTGCCAGGAATCAATTTTGAGGGTTCAGATTTAGCTTG
GAAGAAAAAAGAAACATACATCCTTCAGTATAGGAGATGAGGGAATGAGAGAAAATATTTTTTGAAGAAGCAT
TTCTGTAAATTAGAAATTACTTTTTTAAATCTATTTAAAGTTTGGCTTGAAGAATGCCATCTCTGACTATATGG
CCTTGATTGCAAAGCAGATCAGTGGCTGGGGTGCCTGTTGTGGGTGTGAGTGTGTACAAGAGCGATTGAAGCCA
AATCTGTTGTCTATGTTAGTAAATGATTTGAAAACCTGAATGTAATACTTGAGTAGATTTTTTTTTTCTAGTTTGAAA
TTTAGTCTGTCTTTTTGACCTTACTAATATTTTCAATTAACAAGTTGTAAACTCTGATTGTACTTAGAGATGTGA
CTACCAATCAGTTTGATACTCAAGGAAAGGGGGTATTCAAGAAATTGAAAATTTTATCTTGGACCTCAGTGCAT
CGGTCAAATGGATTTTCAAGAGGTTTAAACTTCCCTGTGATTCCCCCTGAATACCCCAAAATGAGAAACAAAATTT
TTTTTCTTACTCCATTTGTTACTCTCTGTTCTTTGACTGCCACCCACAGAAAAGCAAATAACCAACTACCTAC
TCAATTGTGTGTTTGTAAATGCTTTGAGCAGTCTAGTCAAATCATATAAATTGTTCTAAATTTTCAAGATTGAACA
TTGAAGTATTAACCTCTTCTGTTTACACATTTTAGAATTTTAGCTCCCAAGATGGTAGGGCAGACTGACCGTACAGT
AATTTATTTGTGTTAGTGTAAAGATTAAGCATAGTAACTGACTCTTAAGTGTAAATAATGTAGAAGTAAAAA
AATTTTTTTTTAAAGGCTTAATTTGGGAGGGGGGACTTATTTCTGTTTACAGTGTATTACCTTCTTCCCTCCTCT
TCTCCCCCACACCAACAAAATACAGTTTGAATTCAGTGAACAGTACCAGCAAGTCATGAGATTTTTTTAGTA
AAGATGAGAAAGATGGTTGAAGAAAATTAGTGCATAATTTCTCAGTGAATAAAGTTGTAGCTCTCATATACTAAA
TAGACAAGTTTACATGCTGTTATTTAGAAAATGACTAAAATATAAAAACCGTGTGTGTTAATCTGTTTTAAGT
CATACCATGTTTCAAGATTCTATGTAAGGTGGGTTTTATTTTTCTTTTAAAGGATAGTTTGTAAATAGTAAGAACTG
TCCCATATGTTAGTAAATTACATATGTACAAATTGAACTGTAAATTTGTGAACACTGGAAAGCACCATTGTGACA
TAGAGTAAACATCTTAGTAATATATTAAGTGAATGTAAATGGTGGTTAAAATTACATTACTGTGAAATTCATCT
TCCAACCTAAGTTAAGCTTTGGAGATACATGTTAGTGGTTAACTGTAAAGAGCTTTGAAAACACTGCACATATC
TGTACAAGCCAGAATTACTATTTCTTTGACTTATTATTAGCTTGGCAGTTGCTTTTTGATTTGATTGTTTTATGAC
ATGGTATATCTACTATATTTACTCAGTTTGAACATATTCAATTTCTACACACTATTTTTTAAAAATTGCCCTACTAGGT
GAAACATAACAATAAACTACCTGTGCTGAAATTTGGGGGAAGTTTAGGTCCTTTAAAAAACATATTAATCATT
GACTACATCTATGATAAAAGTGCTTATTTTTGGTTTTACTAAGATAATGCAGTTGGTGGAAATGATAAACGTTTTAA
GTGTTAACATCCTTTGAATGCGTTGGATTTTCAAGAGAATAAACATTTTGTAAAAATCACTTGGTAAGGATTATAAA
CTTAATTACTGCACCTTAAATGAAACATTACTTTTTTTTAAACAATGTGTCACAAATGTAGGTCTGTATTACTTGT
ATGCTTGTGTGACTTACTGTTAGTCCAGCTCTAAAAATTTAAAGGTTGTAAATGAAATACAAGAAAAGAGCCTTC
TTTTAGAAGAAAGCAAGTATATTTTTGCTTTTACTTCAAATGTTATTTAAAGTAGAAATTTAATTTGTAGATATA
ACCTTTAAAAATTTTCTCATTAAAGACAATGTTTTTAATTTAATTTGCCTCATTACATCTAATAGTTCCCATTTGA

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FIGURE 901B

TGGCATGTATAGGGAAGAGTGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAATATTTATATATATATTCACAGTATG
TATTTAGCATTTATTTTATTACAGCAGATTTAAAGTTTGTATCTAAATAATGCCTATGAGTTGTGTGAAGCTCTT
GGCTTTTTTCCAACGTTACTTTGTAACCTAATGAGGGTGGATGTTTCATTGTAGTTTATTTATTTGGTTCTTTAGAT
GGAGGAATTTAAAAAATCAAATTTTCTCTTCACCTTTATGACTTGACATTTCTTGATCTGTTGGAGGCTAAAA
GTAGGTATAAATGATATTGAATGTTGGGTATAGTGATACTCTGCCATAGTTCTTACTGCATGAAGAGAACAAGAG
TCACACAAGTTCACCACTTTGCACCTTCATAGAGAAGGTACATAGAGACATTGCAAAACCTGTCTCCATTTGCTAT
CCTGATAATTAAGGTTTTTATAATACCTAGGGCCTGTCTCTGAGTAATTTTAATTTTGCCAAATACACTGACATT
TAAATAGTGATCCATCTAAATTTTTTTCAGCTGGGTTTTGAGGAATATAAGAGCTTTCAATGATAAAGGTTTGT
TGTAAGTGTCTTATGTGCTGAATTTGCAGATGATCAGATGCTGTGCAGAATTCTGATTTATTTTTGTTTCCTAAA
ATTAAGATAGCTTGAATATTATTTACATTCCTTTTTCTTTTTTAAATAAACAGGTTTGCTTTGGAAAGGCTTAA
TGATGGAATGTTAGCATCTTCACTAGGGTAAAGAAGAACAAAAAGAATGTTGCTGGAACGTAAATAGTATTTAA
AAGTTAATGAACACTTCTCTAGTTTTCTTAGTTATGGCCTTAATAATTAGTCTCTTGGCTTAAATGTCCACTGGT
TTTACTTTTGACACAGTTGAACAACACTGGGGTTAAGTCTCTGGTATTTAGGCTGGCAATATATATATTAACCATA
TTTTAAAAGTACCAATTTTGTTTTTTACAGAAAAGATAAACTCAAAAGAGAACAGTGTATTCCTTCTGAGGGGCT
TTTATAAATTATTAATAATATATATGATGGATTTTTTCCTAATTTTTTATATTTTCCTTACAATTTTGGTGGCCA
TTAATTTAACTTTAGGCTTTTGGGCATATGCTAGTCTGAGCTTCCGAAAAGATACATATATGTTTCCCTTTTCAT
TAGCTGAATGAGGATATTTAAGAAGTTGAAAGAGAATTTATTTTCAAGTTGTGAGTAAATCCTCCTTTGAAATT
CACCTGATTATTAGATAACTTAAAGTTTATTTTTTAAAGCTGACAACTTTTTATGAATCTTCGAGTTGACAGTTC
CTAAAAGCGTAACTCAGATATTAATGGGCTGTGTATTAAATGGTTTTATTTTCAGTTTTGCAGCACAGAACACTG
TTGAAATATCCATATCAACTTGATTTTTTTAACCTAATTCAGGTGTCTTTGCATCTCTTAAATGTTGGGGGTGG
GGGTCAGAGCCAGTTATCCGGCTTCTGTTTTGTGCGATTGCTTAGATTTGTTTCTGTTGTCAAACTGTTACCCCC
AAAATTGGTGTGACACATGCTCATGATAAAATGTTAAAATGAGTACATCCTTGTATTTGTATTTGTTTTCAACA
TCGCCAAGGTGCTATGGGAAATTAACAAAATTAGAAAAAAATAAAATTTATTAAGCAGAAAAA

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FIGURE 902

MNMGRPFQKNRVKPOFRSSGGSEHSTEGSVSLGDGQLNRYSSRNFP AERHNPTVTGHQEQT YLQKETSTLQVEQN
GDYGRGRRTLFRGRRRREDDRISRPH PSTAESKAPTPKFDLLASNFPPLPGSSSRMPGELVWRIGCLMLLKVSTK
KRIMKSTISCPVPADEQTECTSAQQLNMSTSSPCAAELTALSTTQQEKDLIEDSSVQKDGLNQTTIPVSPSTTK
PSRASTASPCNNNINAATAVALQEPRKLSYAEVCQKPPKEPSSVLVQPLRELRSNVVSP TKNEDNGAPENSVEKP
HEKPEARASKDYSGFRGNIIPRGAAGKIREQRRQFSHRAIPQGVTRRNGKEQYVFP RSPK

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FIGURE 903

AAAAGGGAAGCCTGCAACAAGTTAAGCTGAAGACCGAAGCAAGAGCTGGTTCAGCCTGCCAGTGGAGACACTGGG
CCCGGCATCCAGGATGGACCCAGAATCTGAGAGAGCCCTGCAGGCCCTCACAGCCCCTCCAAGACAGATGGGAA
AGAATTAGCTGGGACCATGGATGGAGAAGGGACGCTCTTCCAGACTGAAAGCCCTCAGTCTGGCAGCATTCTAAC
AGAGGAGACTGAGGTCAAGGGCACCCCTGGAAGGTGATGTTTGTGGTGTGGAGCCTCCTGGCCCAGGAGACACAGT
AGTCCAGGGAGACCTGCAGGAGACCACCGTGGTGACAGGCCTGGGACCAGACACACAGGACCTGGAAGGCCAGAG
CCCTCCACAGAGCCTGCCTTCAACCCCCAAAGCAGCTTGGTTCAGGGAGGAGGGCCGCTGCTCCAGCAGTGACGA
TGACACCGACGTGGACATGGAGGGTCTGCGGAGACGGCGGGGCCGGGAGGCCGGCCACCTCAGCCCATGGTGCC
CCTGGCTGTGGAGAACCAGGCTGGGGGTGAGGGTGACAGCGGGGAGCTGGGCATCTCCCTCAACATGTGCCTCCT
TGGGGCCCTGGTTCTGCTTGGCCTGGGGGTCTCTCTTCTCAGGTGGCCTCTCAGAGTCTGAGACTGGGCCCAT
GGAGGAAGTGGAGCGGCAGGTCTCTCCAGACCCGAGGTGCTGGAAGCTGTGGGGGACAGGCAGGATGGGCTAAG
GGAACAGCTGCAGGCCCCAGTGCCCTCCTGACAGTGTCCCCAGCCTGCAAAAACATGGGTCTTCTGCTGGACAAGCT
GGCCAAGGAGAACCAGGACATCCGGCTGCTGCAGGCCAGCTGCAGGCCCAAAAGGAAGAGCTTCAGAGCCTGAT
GCACCAGCCCCAAAGGGCTAGAGGAGGAGAATGCCAGCTCCGGGGGGCTCTGCAGCAGGGCGAAGCCTTCCAGCG
GGCTCTGGAGTCAGAGCTGCAGCAGCTGCGGGCCCCGGCTCCAGGGGCTGGAGGCCGACTGTGTCCGGGGGCCAGA
TGGGGTGTGCCTCAGTGGGGATAGAGGCCACAGGGTGACAAGGCCATCAGGGAGCAAGGCCCCAGGGAGCAGGA
GCCAGAACTCAGCTTCCCGAAGCAGAAGGAACAGCTGGAGGCTGAGGCACAGGCATTAAGGCAAGAGTTAGAGAG
GCAGCGACGGCTGCTGGGGTCTGTACAGCAGGATCTGGAGAGGAGCTTGACAGGATGCCAGCCGCGGGGACCCAGC
TCATGCTGGCTTGGCTGAGCTGGGCCACAGATTGGCCAGAACTGCAGGGCCTGGAGAATCTGGGGCCAGGACCC
TGGGGTCTCTGCCAATGCCTCAAAGGCCTGGCACCAGAAGTCCCACTTCCAGAATTCTAGGGAGTGGAGTGGAAA
GGAAAAGTGGTGGGATGGGCAGAGAGACCGGAAGGCTGAGCACTGGAAACATAAGAAGGAAGAATCTGGCCGGGA
AAGGAAGAAGAATCTGGGGAGGTGAGGAGGACAGGGAGCCAGCAGGAAGGTGGAAGGAGGGCAGGCCAAGGGTGG
GGAGTCGGGGAGCAAGAAGGAGGGCAAGCGACAGGGCCCCGAAGGAACCCCCAAGGAAAAGTGGTAGCTTCCACTC
CTCTGGAGAAAAGCAGAAGCAACCTCGGTGGAGGGAAGGGACTAAGGACAGCCATGACCCCTGCCATCTTGGGC
AGAGCTGTTGAGGCCCAAGTACCGGGCACCCAGGGCTGCTCAGGTGTGGACGAGTGTGCCGGGCAGGAGGGCCT
GACTTTCTTTGGCACAGAGCTAGCCCCAGTGCGGCAACAGGAGCTGGCCTCTCTGCTAAGAACATACTTGGCACG
GCTGCCCTGGGCTGGGCAGCTGACCAAGGAGCTACCCCTCTCACCTGCTTTCTTTGGTGAGGATGGCATCTTCCG
TCATGACCGCCTCCGCTTCCGGGATTTTGTGGATGCCCTGGAGGACAGCTTGGAGGAGGTGGCTGTGCAACAGAC
AGGTGATGATGATGAAGTAGATGACTTTGAGGACTTCATCTTCAGCCACTTCTTTGGAGACAAAGCACTGAAGAA
GAGGTGAGGGAAGAAGGACAAGCACTCACAGAGCCCAAGAGCTGCGGGGCCAGGGAGGGGCACAGCCATAGCCA
CCACCACCACCACCGGGCTGACACCCCTGCCCCACAGGGAATGGCCTTGGCCTGGCCCAGCCCAAGATCCAGCG
TTATCTAACTCCTGGAGGGTGGACTCTGTCTCTGGCTTGTGTTGGTGTCTCAGATATCTTTCACACAGTAGAGCAA
AATCACCAGCCCTGCACTGATGTCACTTTATGTAGAAAAAGGCCTTAGCTGGACCTGTGTTGCCGTCTATGCAAA
TGCATGCAAAATACTCCAGGCCCTGGGATGTGGGCTTGTGTTTGTCACTGTGAAGGGGGAGATGGGAGAGGAGCC
TGTTTTGGGGTGGGGTCTGGGGAAGGCAATCTGATTCTGAAGCTAAAGAGCTTTCATCCTCTTGAGTGTATGTCC
CCATAGTGGGCCCCCTTGACCCACATGCTGACCGGTGCCTTGGGATTTGACTAGAGTTGCTGGCTCGAGGCCAGC
ACGAGGACTTACCTGGGGTTTTGTTAGGTTTTGGAAGCAGCTGTCCCTAGGGGGTGAAGTCCCCCCCCCTTTTTTT
TTTTACCCCTGCTTCTCCACGGCTTACCTCCCTATGTGAAGTGTAGACTCAGATCCCAATAAAGTGCTGTTGC
AGCTATGATGCTAGGTGGTTTTCTAAGCACAGGGGACACCCACACCCCTGCCTGAATGGATGGGTCCATCCAG
GCACTGGTACTTGCCCCCTTGTCTGTATCCCCCTTGGCCCTGCCTTGCCCTTCCAACAAACCCTAGGCCCTTG
AGAAGCTGATACTTCTCCTTTTGTCTACAGCTGCCTTGGCCCCACCCCTGGGAGATGTAGCAAATTGAGTGTGGG
TTTTGGAGTCTGAGCCTCAGGCTCAAATCCAGGCCAAGTGATCTTGGGCAAGTTAATCTCTGGGGACTTTGGGTT
TCTTATCTCAAAAAAGGCGATGGAAGGGCTGGGGAAGTGATTAAATAAAGCAACGCAAGAAAAATGCC

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FIGURE 904

MDPESERALQAPHSPSKTDGKELAGTMDGEGTLFQTESPQSGSILTEETEVKGTLEGDVCGVEPPGPGDTVVOGD
LQETT VVTGLGPD TDLEGQSPPQSLPSTPKAAWFREEGRCSSDDDDTDVMEGLRRRRGREAGPPQPMVPLAVE
NQAGGEGAGGELGISLNMCLLGALVLLGLGVLLFSGGLSESETGPMEEVERQVLPDPEVLEAVGDRQDGLREQLQ
APVPPDSVPSLQNMGLLLDKLAKENQDIRLLQAQLQAQKEELQSLMHQPKGLEEENALRGALQQGEAFQRALES
ELQQLRARLQGLEADCVRGPDGVCLSGDRGPQGDKAIREQGPREQEPELSFPKQKEQLEAEQAALRQELERQRL
LGSVQQDLERSLQDASRGDPAHAGLAELGHRLAQKLOGLLENWGQDPGVSANASKAWHQKSHFQNSREWSGKEKWW
DGQRDRKAEHWKHKKEESGRERKKNWGGQEDREPAGRWKEGRPRVEESGSKKEGKRQGPKEPPRKSGSFHSSGEK
QKQPRWREGTKDSDPLPSWAELLRPKYRAPQGC SGVDECARQEGLTFFGTTELAPVRQQELASLLRTYLARLPWA
GQLTKEPLSPAFFGEDGIFRHDRLRFDFVDALEDSLEEVAVQQTGDDDEVDDFEDFIFSHFFGDKALKKRSKG
KDKHSQSPRAAGPREGHSHSHHHHHRG

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FIGURE 905

CGAGGATGTGCGTGGGGGCTCGGCGGCTGGGCCGCGGGCCGCTGTGCGGCTCTGCTCCTCCTGGGCCTGGGGCTGA
GCACCGTGACGGGGCTCCACTGTGTGCGGGGACACCTACCCAGCAACGACCGGTGCTGCCACGAGTGCAGGCCAG
GCAACGGGATGGTGAGCCGCTGCAGCCGCTCCCAGAACACGGTGTGCCGTCCGTGCGGGCCGGGCTTCTACAACG
ACGTGGTCAGCTCCAAGCCGTGCAAGCCCTGCACGTGGTGTAACCTCAGAAAGTGGGAGTGAGCGGAAGCAGCTGT
GCACGGCCACACAGGACACAGTCTGCCGCTGCCGGGCGGGCACCCAGCCCCTGGACAGCTACAAGCCTGGAGTTG
ACTGTGCCCCCTGCCCTCCAGGGCACTTCTCCCCAGGCGACAACCAGGCCTGCAAGCCCTGGACCAACTGCACCT
TGGCTGGGAAGCACACCCTGCAGCCGGCCAGCAATAGCTCGGACGCAATCTGTGAGGACAGGGACCCCCAGCCA
CGCAGCCCCAGGAGACCCAGGGCCCCCGGCCAGGCCCATCACTGTCCAGCCCCTGAAGCCTGGCCCAGAACCT
CACAGGGACCCCTCCACCCGGCCCCGTGGAGGTCCCCGGGGGCGGTGCGGTTGCCGCCATCCTGGGCCTGGGCCTGG
TGCTGGGGCTGCTGGGCCCCCTGGCCATCCTGCTGGCCCTGTACCTGCTCCGGAGGGACCAGAGGCTGCCCCCG
ATGCCCACAAGCCCCCTGGGGGAGGCAGTTTCCGGACCCCCATCCAAGAGGAGCAGGCCGACGCCCACTCCACCC
TGGCCAAGATCTGACCTGGGCCCACCAAGGTGGACGCTGGGCCCCGCCAGGCTGGAGCCCGGAGGGTCTGCTGGG
CGAGCAGGGCAGGTGCAGGCCGCCTGCCCCGCCACGCTCCTGGGCCAACTCTGCACCGTTCTAGGTGCCGATGGC
TGCCTCCGGCTCTCTGCTTACGTATGCCATGCATACCTCCTGCCCCGCGGGACCACAATAAAACCTTGGCAGAC
GGGAGTCTCCGACCGGCAAAAAAAAAAAAAAAAAA

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FIGURE 906

MCVGARRLGRGPCAALLLLGLGLSTVTGLHCVGDTYP SNDRCCHECRPGNGMVSRCRSQNTVCRPCGPGFYNDV
VSSKPCKPCTWCNLRSGSERKQLCTATQDTVCRCRAGTQPLDSYKPGVDCAPCPPGHFSPGDNQACKPWINCTLA
GKHTLQPASNSSDAICEDRDPPATQPQETQGPPARPI TVQPTAEAWPRTSQGPSTRPVEVPGGRAVAAILGLGLVL
GLLGPLAILLALYLLRRDQRLPPDAHKKPPGGGSFRTPIQEEQADAHSTLAKI

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FIGURE 907

ATGACCAAAGCTGATCTCATAAATAATTTGGGAACCAT TGCCAAGTCTGGTACTAAAGCATT CATGGAGGCTCTT
CAGGCTGGTGCAGACATCTCCATGATTGGGCAGTTTGGTGTGGCTTTTATTCTGCCTACTTGGTGGCAGAGAAA
GTGGTTGTGATCACAAGCACAAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCCTTCACTGTG
CGTGTGACCATGGTGTAGCCCATTGGCAGGGGTACCAAAGTATCCTCCATCTTAAAGAAGATCAGACAGAGTAC
CTAGAAGAGAGGCGGGTCAAAGAAGTAGTGAAGAAGCATTCTCAGTTCATAGGCTATCCCATCACCCCTTTATTTG
GAGAAGGAACGAGAGAAGGAAATTAGTGATGATGAGGCAGAGGAAGAGAAAGGTGAGAAAGAAGAGGAAGATAAA
GATGATGAAGAAAAGCCCAAGATCGAAGATGTGGGTT CAGATGAGGAGGATGACAGCGGTAAGGATAAGAAGAAG
AAACTAAGAAGATCAAAGAGAAATACATTGATCAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAAC
CCTGATGACATCACCCAAGAGGAGTATGGAGAATTCTACAAGAGCCTCACTAATGACTGGGAAGACCACTTGGCA
GTCAAGCACTTTTCTGTAGAAGGTCAGTTGGAATTCAGGGCATTGCTATTTATTCCTCGTCGGGCTCCCTTTGAC
CTTTTTGAGAACAAGAAGAAAAAGAACACATCAAAC TCTATGTCCGCCGTGTGTTTCATCATGGACAGCTGTGAT
GAGTTGATACCAGAGTATCTCAATTTTATCCGTGGTGTGGTTGACTCTGAGGATCTGCCCCGTAACATCTCCCGA
GAAATGCTCCAGCAGAGCAAAATCTTGAAAGTCATT CGCAAAAACATTGTTAAGAAGTGCCTTGAGCTCTTCTCT
GAGCTGGCAGAAGACAAGGAGAATTACAAGAAATTC TATGAGGCATTCTCTAAAAATCTCAAGCTTGGAATCCAC
GAAGACTCCACTAACCGCCGCCGCTGTCTGAGCTG CTGCGCTATCATACCTCCAGTCTGGAGATGAGATGACA
TCTCTGTCTAGAGTATGTTTCTCGCATGAAGGAGAC ACAGAAGTCCATCTATTACATCACTGGTGAGAGCAAAGAG
CAGGTGGCCAACTCAGCTTTTGTGGAGCGAGTGCGG AAACGGGGCTTCGAGGTGGTATATATGACCGAGCCCATT
GACGAGTACTGTGTGCAGCAGCTCAAGGAATTTGAT GGGAAAGAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAG
CTGCCGTGAGGATGAGGAGGAGAAGAAGAAGATGG AAGAGAGCAAGGCAAAGTTTGAGAACCTCTGCAAGCTCATG
AAAGAAATCTTAGATAAGAAGGTTGAGAAGGTGACA ATCTCCAATAGACTTGTGTCTTCACCTTGCTGCATTGTG
ACCAGCACCTACGGCTGGACAGCCAATATGGAGCGG ATCATGAAAGCCAGGCACTTCGGGACAACCTCCACCATG
GGCTATATGATGGCCAAAAAGCACCTGGAGATCAAC CCTGACCACCCATTGTGGAGACGCTGCGGCAGAAGGCT
GAGGCCGACAAGAATGATAAGGCAGTTAAGGACCTG GTGGTGTCTGCTGTTTGAAACCGCCCTGCTATCTTCTGGC
TTTTCCCTTGAGGATCCCCAGACCCACTCCAACCGC ATCTATCGCATGATCAAGCTAGGTCTAGGTATTGATGAA
GATGAAGTGGCAGCAGAGGAACCCAATGCTGCAGTT CCTGATGAGATCCCCCTCTCGAGGGCGATGAGGATGCG
TCTCGCATGGAAGAAGTCGATTTAGGTTAGGAGTTCATAGTTGGAAAAC TTGTGCCCTTGATAGTGTCCCCATGG
GCTCCCACTGCAGCCTCGAGTGCCCCCTGTCCCACT GGCCTCCCCCTGCTGGTGTCTAGTGTTTTTTT

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FIGURE 908

MTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVVVITKHNDDEQYAWESSAGGSFTV
RADHGEP IGRGTKVILHLKEDQTEYLEERRVKEVVKKHSQFIGYPITLYLEKEREKEISDDEAEEEEKGEKEEEDK
DDEEKPKIEDVGSDEEDDSGKDKKKKTKKIKEKYIDQEELNKTTP IWTNPDDITQEEYGEFYKSLTNDWEDHLA
VKHFSVEGQLEFRALLFIPRRAPFDLFENKKKKNNIKLYVRRVFIMDSCDELIPEYLNFI RGVVDSEDLPLNISR
EMLQQSKILKVIRKNIVKKCLELFSELAEDKENYKKFYEAFSKNLKLGIHEDSTNRRRLSELLRYHTSQSGDEMT
SLSEYVSRMKETQKSIYYITGESKEQVANS AFVERVRKRGFEVVYMT EPIDEYCVQQLKEFDGKSLVSVTKEGLE
LPEDEEEKKKMEESKAKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTANMERIMKAQALRDNSTM
GYMMAKKHLEINPDHP IVETLRQAEADKNDKAVKDLVLLFETALLSSGFSLEDPQTHSNRIYRMIKLGLGIDE
DEVAAEEPNAAPVDEIPPLEGDEDASRMEEVD

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FIGURE 909

ACTCTTCTGGTCCCCACAGACTCAGAGAGAACCCACCATGGTGCTGTCTCCTGCCGACAAGACCAACGTCAAGGC
CGCCTGGGGTAAGGTCGGCGCGCACGCTGGCGAGTATGGTGCGGAGGCCCTGGAGAGGATGTTCTGTCTTCCC
CACCACCAAGACCTACTTCCCGCACTTCGACCTGAGCCACGGCTCTGCCAGGTTAAGGGCCACGGCAAGAAGGT
GGCCGACGCGCTGACCAACGCCGTGGCGCACGTGGACGACATGCCCAACGCGCTGTCCGCCCTGAGCGACCTGCA
CGCGCACAAGCTTCGGGTGGACCCGGTCAACTTCAAGCTCCTAAGCCACTGCCTGCTGGTGACCCTGGCCGCCCA
CCTCCCCGCCGAGTTCACCCCTGCGGTGCACGCCTCCCTGGACAAGTTCCTGGCTTCTGTGAGCACCGTGCTGAC
CTCCAAATACCGTTTAAGCTGGAGCCTCGGTAGCCGTTCTCTCTGCCGCTGGGCCTCCCAACGGGCCCTCCTCCC
CTCCTTGACCGGCCCTTCCTGGTCTTTGAATAAAGTCTGAGTGGGCGGC

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FIGURE 910

MVLSPADKTNVKAANGKVGAGHAGEYGAEALERMFLSFPTTKTYFPHFDLSHGSAQVKGHGKKVADALTNAVAHVDD
DMPNALSALSDLHAHKLRVDPVNFKLLSHCLLVTLAAHLPAEFTPAVHASLDKFLASVSTVLTSKYR

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FIGURE 911

GGAGTGC GGGGCGCCCGGCCAGGGGAGCCGCCACAGCCATCGGATTGCAAAGATAGACCAGCTTTTCCAGTTAA
GAAGTTAATACAAGCCCGTCTGCCGTTTAAGCGCCTGAATCTTGTCCTAAAGGGGAAAGCCGATGACATGTCAGA
CGATCAGGGTACTTCTGTGCAAAGTAAAAGCCCCGATTTAGAGGCCTCTTTGGACACCTTGGAAAACAACTGTCA
TGTGGGTTCTGACATAGACTTTAGACCGAAACTTGTCAACGGGAAGGGTCCCTTAGATAACTTTTTAAGAAATAG
AATCGAAACCAGTATTGGCCAGAGCACAGTCATCATTGATTTGACAGAGGACTCGAATGAGCAGCCAGACAGTCT
TGTGGACCACAATAAACTAAATTCTGAAGCCTCTCCCTCCAGGGAGGCAATAAATGGCCAGCGAGAAGACACTGG
GGATCAGCAGGGGTTGTTGAAGGCCATTGAGAACGACAAGTTGGCATTTCCTGGAGAGACCTTTTCAGACATTCC
TTGCAAAACAGAGGAGGAGGGTGTGGCTGTGGAGGTGCAGGGAGGAGAGGGCGACTCCAGGAATGTTCCGCCAG
GAGCTGCCCGGAGCTGACGAGTGGCCCCGAGAATGTGCCCCAGAAAGGAGCAGGACAGTTGGAGTGAAGCTGGGGG
CATCCTGTTCAAAGGGAAGGTGCCTATGGTGGTCTTGACAGACATCTTGGCTGTGAGACCACCGCAAATCAAGTC
CCTTCCAGCCACACCCCAAGGCAAGAACATGACCCCTGAGAGTGAAGTGTGGAATCTTTCCCGAAGAAGACTC
TGTACTCAGCCATTTCGTCCCTGAGCTCTCCCTCTTCCACCAGCTCGCCCGAGGGGCGCCTGCTCCCCCAAAGCA
GCACAGCAGTACCAGTCCCTTCCCCACCTCCACGCCCTCCGCAGAATAACTAAGAAATTCGTCAAAGGCTCTAC
AGAGAAGAACAAGCTCAGACTGCAAAGAGATCAGGAGCGTCTGGGCAAGCAGCTCAAGTTACGTGCAGAAAGGGA
AGAAAAGGAGAAGCTGAAGAGAGGAGGCCAAGCGGGCAAGGAGGAGGCCAAGAAGAAGAGGAGGAAGAGAAGGA
GCTTAAGGAAAAGGAGAGGCGGGAGAAGCGGGAGAAGGATGAGAAGGAGAAGGCGGAGAAGCAGCGGCTCAAGGA
GGAGCGGCGCAAGGAGAGACAGGAAGCCCTGGAGGCTAACTTGAGGAAAAAGGAAAAAGGAAGAAGAGAAACG
GTTAAGAGAAGAAGAGAAGCGCATTAAAGCAGAGAAGGCCGAAATCACGAGGTTCTTCCAGAAACCAAAGACTCC
ACAGGCCCCCAAGACCCTGGCCGGCTCCTGTGGGAAGTTTGCCCCCTTTGAAATTAAAGAGCACATGGTCCTGGC
CCCTCGGCGTCGGACCGCTTTCCATCCAGACCTCTGCAGTCAGCTGGACCAGCTCCTCCAGCAGCAGAGCGGCGA
GTTCTCCTTCTTGAAAGACCTCAAAGGCCGGCAGCCCCCTGAGGTCCGGACCCACGCACGTTTCCACCCGGAATGC
AGATATTTTTAACAGTGAATGTCGTATCGTGGAGCGTGGGAAGGGCGACGGTGTTCCTCCGAGAGGAGGAAGTTTG
CAGGATGAAGCTCCTGCAGTTCTGTGAGAACCACCGGCTGCCTACTGGGGTACCTGGAATAAGAAGACGGCACT
CATCCGCGCGCAGACCCCTGGGCCCAGGACACGAAGCTCCTGGACTATGAGGTGGACAGTGAATGAGGAGTGGGA
AGAAGAGGAGCCTGGGGAGTCCCTGTCCACAGTGAGGGGGATGATGATGACGACATGGGAGAGGATGAAGATGA
GGACGATGGTTTCTTTGTGCCCCATGGGTACCTGTCTGAGGACGAAGGTGTGACAGAGGAGTGTGCCGACCCCTGA
GAACCATAAGGTCCGCCAGAACTGAAGGCCAAGGAGTGGGACGAGTTCCTGGCTAAGGGGAAGCGCTTTCCGCT
CCTGCAACCTGTGAAGATCGGCTGCGTGTGGGCGGCTGACAGAGACTGCGCAGGCGATGACCTGAAGGTACTGCA
GCAGTTTCGACGCTGCTTCCCTGGAGACCTGCCGGGCCAGGAGGAGCAGACGCCCAAGGCCTCCAAGCGGGAGAG
GAGAGACGAGCAGATCCTGGCCCAGCTGCTGCCGCTCCTGCACGGCAATGTGAACGGGAGCAAGGTCATCATCCG
GGAGTTCCAGGAGCACTGCCGCCGGGGACTGCTCAGCAACCACACCGGCAGCCCGCGGACGCCCTCCACCACCTA
CCTGCACACCCCCACCCCCAGCGAGGATGCCGCCATCCCCTCTAAGTCCCGGCTCAAGCGGCTCATTTCCGAGAA
CTCAGTGTATGAGAAGCGGCCTGACTTCAGGATGTGCTGGTACGTGCACCCGCAGGTGCTACAGAGCTTCCAGCA
GGAGCACCTGCCCGTGCCGTGCCAGTGGAGCTATGTGACATCGGTGCCCTCGGCCCCAAAGAGGACAGTGGCAG
CGTCCCCCTCCACGGGGCCCAGCCAGGGCACTCCCATCTCGCTGAAGAGGAAGTCAGCGGGCAGCATGTGCATCAC
CCAATTATGAAGAAGCGCAGGCACGACGGCCAGATTGGTGTGTAAGACATGGACGGCTTCCAGGCAGACACGGA
GGAGGAGGAAGAGGAGGAGGGCGACTGTATGATCGTGGATGTCCCGGATGCTGTGGAGGTCCAAGCCCCGTGTGG
AGCCGCTTCCGGAGCTGGGGGTGGTGTGGGGGTGGACACCGGCAAGGCCACCCTGACCGCGAGCCCACTGGGTGC
ATCCTGAGAGCAGGGGTGACGTATGTAGAACGCTTAGGGTGTCTCCCCACAGAGCAGATACTTGAACCGACTCA
ATTCTGTGTAAAGAGCACTTTGTCTGCTTCACGGACCTCCCCAAAGTGTGCAGAGTTCTATATAGGATGCTGG
ATTAGTTCTTTGATATTTGTAAAAATTCCCCCAAGAGCCGCATATGAATCTGCCCTTTAATAAAGCATTATTGA
GATTGCTGGCCTATTGGGAAGCTGCGGGCACAGGA

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FIGURE 912

MDCKDRPAFPVKKLIQARLPFKRLNLVPGKGADDMSDDQGTSTVQSKSPDLEASLDTLENNCHVGSDIDFRPKLVN
GKGPLDNFLRNRIETSIGQSTVIIDLTTEDSNEQPDSDLVDHNKLNSEASPSREAINQREDTGDQQGLLKAIQNDK
LAFPGETLSDIPCKTEEGVGCGGAGRRGDSQECSPRSCPELTSGPRMCPRKEQDSWSEAGGILFKGKVP MVVLQ
DILAVRPPQIKSLPATPQGKNMTPSEVLESFPEEDSVLSHSSLSSPSSTSSPEGPPAPPKQHSSTSPFFTSTPL
RRITKKFVKGSTTEKNKLRLQDQERLGKQLKLRAEEREEKEKLKEEAKRAKEEAKKKKEEEKELKEKERREKREK
EKEKAQQLKEERRKERQEALAKLEEKRKKEEEKRLREEEKRIKAEAEITRFFQKPKTPQAPKTLAGSCGKF
APFEIKEHMLAPRRRTAFHPDLCSQLDQLLQQQSGEFSFLKDLKGRQPLRSGPTHVSTRNADIFNSDVVIVERG
KGDGVPERRKFGRMKLLQFCENHRPAYWGTWNKKTALIRARDPWAQDTKLLDYEVDSDDEWEEEEEPGESLSHSEG
DDDDDMGEDEDEDDGFFVPHGYLSEDEGVTEECADPENHKVRQKLKAKEWDEF LAKGKRFRVLQPVKIGCVWAAD
RDCAGDDLKVLQQFAACFLETLP AQEEQTPKASKRERRDEQILAQLLPLLHGNVNGSKVIIREFQEHCRRLLSN
HTGSPRTPSTTYLHTPTPSEDAAIPSKSRLKRLISENSVYEKRPDFRMCWYVHPQVLQSFQQEHLVPVCQWSYVT
SVPSAPKEDSGSVPSTGPSQGTPI SLKRKSAGSMCITQFMKKRRHDGQIGAEDMDGFGADTEEEEEEEEGDCMIVD
VPDAVEVQAPCGAASGAGGGVGVD TGKATLTASPLGAS

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FIGURE 913

GGCACGAGGTTCCGAGTTGCGATGCTGTACTTCTCTTTGTTTTGGGCGGCTCGGCCTCTGCAGAGATGTGGGCAG
CTGGTCAGGATGGCCATTTCGGGCTCAGCACAGCAACGCAGCCCAGACTCAGACTGGGGAAGCAAACAGGGGCTGG
ACAGGCCAGGAGAGCCTGTCCGACAGTGATCCTGAGATGTGGGAGTTGCTGCAGAGGGAGAAGGACAGGCAGTGT
CGTGGCCTGGAGCTCATTGCCTCAGAGAACTTCTGCAGCCGAGCTGCGCTGGAGGCCCTGGGGTCTGTCTGAAC
AAACAAGTACTCGGAGGGTTATCCTGGCAAGAGATACTATGGGGGAGCAGAGGTGGTGGATGAAATTGAGCTGCTG
TGCCAGCGCCGGGCTTGGAGCCCTTGACCTGGATCCTGCACAGTGGGGAGTCAATGTCCAGCCCTACTCCGGG
TCCCCAGCCAACCTGGCCGTCTACACAGCCCTTCTGCAACCTCACGACCGGATCATGGGGCTGGACCTGCCCGAT
GGGGGCCATCTCACCCACGGCTACATGTCTGACGTCAAGCGGATATCAGCCACGTCCATCTTCTTCGAGTCTATG
CCCTATAAGCTCAACCCCCAAAACCTGGCCTCATTGACTACAACCAGCTGGCACTGACTGCTCGACTTTTCCGGCCA
CGGCTCATCATAGCTGGCACCAGCGCCTATGCTCGCCTCATTGACTACGCCCGCATGAGAGAGGTGTGTGATGAA
GTCAAAGCACACCTGCTGGCAGACATGGCCACATCAGTGGCCTGGTGGCTGCCAAGGTGATTCCCTCGCCTTTC
AAGCACGCGGACATCGTCACCACCCTACTCACAAGACTCTTCGAGGGGCCAGGTGAGGGCTCATCTTCTACCGG
AAAGGGGTGAAGGCTGTGGACCCCAAGACTGGCCGGGAGATCCCTTACACATTTGAGGACCGAATCAACTTTGCC
GTGTTCCCATCCCTGCAGGGGGGCCCCACAATCATGCCATTGCTGCAGTAGCTGTGGCCCTAAAGCAGGCCTGC
ACCCCATGTTCCGGGAGTACTCCCTGCAGGTTCTGAAGAATGCTCGGGCCATGGCAGATGCCCTGCTAGAGCGA
GGCTACTCACTGGTATCAGGTGGTACTGACAACCACCTGGTGTGGTGGACCTGCGGCCCAAGGGCCTGGATGGA
GCTCGGGCTGAGCGGGTGTAGAGCTTGTATCCATCACTGCCAACAAGAACACCTGTCTGGAGACCGAAGTGCC
ATCACACCGGGCGGCTGCGGCTTGGGGCCCCAGCCTTAACTTCTCGACAGTTCCGTGAGGATGACTTCCGGAGA
GTTGTGGACTTTATAGATGAAGGGGTCAACATTGGCTTAGAGGTGAAGAGCAAGACTGCCAAGCTCCAGGATTTT
AAATCCTTCTGCTTAAGGACTCAGAAACAAGTCAGCGTCTGGCCAACCTCAGGCAACGGGTGGAGCAGTTTGCC
AGGGCCTTCCCCATGCCTGGTTTTGATGAGCATTGAAGGCACCTGGGAAATGAGGCCCACAGACTCAAAGTTACT
CTCCTTCCCCCTACCTGGGCGAGTGAATAGAAAGCCTTTCTATTTTTTGGTGCGGGAGGGAAGACCTCTCACTT
AGGGCAAGAGCCAGGTATAGTCTCCCTTCCCAGAATTTGTAAGTGAAGATCTTTTCTTTTTCTTTTTTTGGT
AACAAGACTTAGAAGGAGGGGCCAGGCACTTTCTGTTTGAACCCCTGTCATGATCACAGTGTGAGAGACGCGTCC
TCTTTCTTGGGGAAGTTGAGGAGTGCCCTTACAGAGCCAGTAGCAGGCAGGGGTGGGTAGGCACCCCTCCTTCCTGT
TTTTATCTAATAAAATGCTAACCTGCAAAAAAAAAAAAAAAAAAAAAAAAAAATCAGACTAGGTGGACTCTGCCTG
CCTACCTGGTCTGGGAAGATGTTCTACCATATCTCCCTAGAGCACGAAATCCTGCTGCACCCGCGCTACTTCGGC
CCCAACTTGCTCAACACGGTGAAGCAGAAGCTCTTCACCGAGGTGGAGGGGACCTGCACAGGGAAGTGAGTGTG
AGCTCACCGCACCGCCAGATCGTTTCGATGCGCACACGGGGCGCTATACCTGCAACCCCTCCCCAACTCCTACTCG
TCCTGCCACCCACTCTGGGGACCCCTCTCCTCTCTCAGGCAGCCAGTTGCTTCCTGCTTTGGGTTCCAGGGCGC
CCTCTGCAATGCTGGACAATAAGACTTCCTTCTCTCAGCTGAGATGGGTCAATCATTGACTCCTCAAACATTTTA
AAAACCTTGGTGTGTGCCAGGACCCGTGTTGGGCTCAGAACAAGGTAGAATGGGAACAAGATAGAATGAGGACA
GCCCCGTGTGGAGCTCACAGTGTAAATCATTGTTCCCTGTGTCTGCTCTCCCTCTGTCTATTCTGTGTTTTCTCTTA
TCCCTGTGCCCAGGGACCACACACCATGGGCCTCTATATATCTTCTGAATGAATGACCAGAAAAAGCAGATCGA
GAGTTTGGGGGAGGAAGGAAGTAGCCTGGGATTTGACCATCTCTGGGCTTTGCACAGAGGGGCTCTCTGATATT
AATGAGCTGGGACCCAGCTCAGGGCAGTGGAGTACTTGGGCCTCCAGCATCAGAAAAACCTGCAGGAACATGCAG
ATTCTGAGCCTCCTTATTCCTACAGAATCAAGACTGTCTGGGGCAGACCTGAGAATCTGCATTTTAAGAAGAT
GATTCTCAGGCATCCCGAAGATTGAGATCTGTTGCCTCAAGGACTCCAGCCTTCTTGGACATTTATTGTGAAATT
ACCAGAACAGCATTTGGTCTTACACATACTGATCTCTGTTCTGTCTTCTTTTGGTTCATTAAGCTCTCTGGGAGCA
GAGGTGCTATCTACTTGTCTTTTGTCTCTCCCCGACCCTACCCCCAAGAGCTCAGCGACTTTTATTGCAGATGTC
TTTAGAGGCTCTTGGACACACAGTGTCTTCTGTCTTCTCATCTCCTTGCAGGTTGGACTCTTACAGAAATTGG
GCCCATGTCTTGTCTCATCTCTCGACATTCCATCCCTTACAGAGATGGAGTTTGATCCTAACTCCAACCCACCATG
TTACAAGACAATGGATGAGGATATTGTGATTGAGCAGGACGATGAGATCCGCTTAAAGATTGTGGGGACCCGTGT
GGACAAGAATGACATTTTGTATTGGCTCCCTGATGGACGATTACTTGGGGCTTGAAGCTGAGCCTGGTGGCC
TCCTACCCCTTGGTCTACTCTAGGAAGTGTGATTGTACACTTATCATGTTGTCCAGAGGTCCAGTCTGGCTGCT
GTTGTGGAGGCAAGGAAGGCAACTCATCCAGAAGGCATCTGGTGCTTCTTGTAGCTTAACTACTGCCTCCTCAT
TTTTCAGTATGTGTTCTAAGTATAAAAAGTCCTTGGTTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAA

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FIGURE 914

MLYFSLFWAARPLQRCGQLVRMAIRAQHSNAAQTQTGEANRGWTGQESLSDSDPEMWELLQREKDRQCRGLELIA
SENFCSRAALEALGSCLNNKYSEGYPGKRYYGGAENVDEIELLCQRRALEAFDLDPAQWGVNVQPYSGSPANLAV
YTALLQPHDRIMGLDLPDGGHLTHGYMSDVKRISATSIFFESMPYKLNPKTGLIDYNQLALTARLFRPRLI IAGT
SAYARLIDYARMREVCDEVKAHLLADMAHISGLVAAKVIPSPFKHADIVTTTTHTKTLRGARSLIFYRKGVKA
VD
PKTGREIPYTFEDRINFAVFPSLQGGPHNHAI AAVAVALKQACTPMFREYSLQVLKNARAMADALLERGYSLVSG
GTDNHLVLVDLRPKGLDGARAERVLELV SITANKNTCPGDRSAITPGGLRLGAPALTSRQFREDDFRRVVD FIDE
GVNIGLEVKSKTAKLQDFKSFLDKDSETSQRLANLRQVEQFARAFPM PGFDEH

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FIGURE 915

CTGCCCCGTCCGGCGCACGCTCCGCCTCCGTCAAGTTGGCTCCGCTGTCGGGTGCGCGGCGTGAGCGGCAGCCGG
TCTGGACGCGCGGCCGGGGCTGGGGGCTGGGAGCGCGGCGCAAGATCTCCCGCGCGAGAGCGGCCCCCTGCCA
CCGGGCGAGGCCTGCGCCGCGATGGCAGAGATGGGCAGTAAAGGGGTGACGGCGGGAAAGATCGCCAGCAACGTG
CAGAAGAAGCTCACCCGCGCGCAGGAGAAGGTTCTCCAGAAGCTGGGGAAGGCAGATGAGACCAAGGATGAGCAG
TTTGAGCAGTGCCTCCAGAATTTCAACAAGCAGCTGACGGAGGGCACCCGGCTGCAGAAGGATCTCCGGACCTAC
CTGGCCTCCGTCAAAGCCATGCACGAGGCTTCCAAGAAGCTGAATGAGTGTCTGCAGGAGGTGTATGAGCCCCGAT
TGGCCCGGCAGGGATGAGGCAAACAAGATCGCAGAGAACAACGACCTGCTGTGGATGGATTACCACCAGAAGCTG
GTGGACCAGGCGCTGCTGACCATGGACACGTACCTGGGCCAGTTCCCCGACATCAAGTCACGCATTGCCAAGCGG
GGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACTACGAGTCCCTTCAAAGTGCACAAAAGAAGGATGAA
GCCAAAATTGCCAAGGCCGAGGAGGAGCTCATCAAAGCCCAGAAGGTGTTTGAGGAGATGAATGTGGATCTGCAG
GAGGAGCTGCCGTCCCTGTGGAACAGCCGCGTAGGTTTCTACGTCAACACGTTCCAGAGCATCGCGGGCCTGGAG
GAAAAGTCTCCACAAGGAGATGAGCAAGCTCAACCAGAACCTCAATGATGTGCTGGTTCGGCCTGGAGAAGCAACAC
GGGAGCAACACCTTACGGTCAAGGCCAGGCCAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCCT
CCAGATGGCTCCCTTCCCGCCACCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCC
GGGGCCACCCTCCCCAAGTCCCATCTCAGCTCCGGAAAGGCCACCAGTCCCTCCGCCTCCCAAACACACCCCCG
TCCAAGGAAGTCAAGCAGGAGCAGATCCTCAGCCTGTTTGAGGACACGTTTGTCCCTGAGATCAGCGTGACCACC
CCCTCCCAGCCAGCAGAGGCCTCGGAGGTGGCGGGTGGGACCCAACCTGCGGCTGGAGCCAGGAGCCAGGGGAG
ACGGCGGCAAGTGAAGCAGCCTCCAGCTCTCTTCCCTGCTGTCGTGGTGGAGACCTTCCAGCAACTGTGAATGGC
ACCGTGGAGGGCGGCAGTGGGGCCGGGCGCTTGGACCTGCCCCAGGTTTCATGTTCAAGGTACAGGCCACGAC
GACTACACGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGTATGTGGTGTGTTGATCCCTTCCAGAAC
CCTGAAGAGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCACAAAGGAGCTGGAGAAG
TGCCGTGGCGTCTTCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGCAGCCTCCGGGCGTGT
GAAGAACACCTCCTCCCGAAAAATGTGTGGTTCTTTTTTTTGTGTTTGTGTTTTCGTTTTTCATCTTTTGAAGAGCAA
AGGGAAATCAAGAGGAGACCCCGAGGAGGGGCGTTCTCCCAAAGATTAGGTCGTTTTTCAAAGAGCCGCGTC
CCGGCAAGTCCGGCGGAATTCACCAAGTGTTCCTGAAGCTGCTGTGTCCTCTAGTTGAGTTTCTGGCGCCCCCTGCC
TGTGCCCCGATGTGTGCCTGGCCGCAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTTGCCTGAAGCTTCGGC
CGCGCCACCCGGGCAAGGTCCTCTTTTCTGGCAGCTGCTGTGGGTGGGGCCAGACACCAGCCTAGCCTGGCT
CTGCCCCGCAGACGGTCTGTGTGCTGTTTGAATAAATCTTAGTGTTCAAACAAAATGAAACAAAAAAAAT
GATAAAAACCTTTCAG

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FIGURE 916

MAEMGSKGVTAGKIASNVQKKLTRAQEKVLQKLGKADETKDEQFEQCVQNFNKQLTEGTRLQKDLRTYLASVKAM
HEASKKLNELQEVYEPDWPGRDEANKIAENNDLLWMDYHQKLVDQALLTMDTYLGQFPDIKSRIAKRGRKLVDY
DSARHHYESLQTAKKKDEAKIAKAEELIKAQKVFEEMNVDLQEELPSLWNSRVGFYVNTFQSIAGLEENFHKEM
SKLNQNLNDVLVGLEKQHGSNTFTVKAQPSDNAPAKGNKSPSPPDGSPAATPEIRVNHEPEPAGGATPGATLPKS
PSQLRKGPVPPPPKHTPSKEVKQEQLSLFEDTFVPEISVTTSPQAEASEVAGGTQPAAGAQEPGETAASEAA
SSSLPAVVVETFPATVNGTVEGGSGAGRLDLPPGFMFKVQAQHDYTATDTDELQKAGDVVLVIPFQNPPEEQDEG
WLMGVKESDWNQHKLEKCRGVFPENFTERVP

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FIGURE 917

AAAGCAGAATTGAGAGTTTGTCTTACACACAAGTTTAAATGCCACCTTCCTCTGTCTGCCATGGACCAACAAGCA
ATATATGCTGAGTTAAACTTACCCACAGACTCAGGCCCAGAAAGTTCTTCACCTTCATCTCTTCCTCGGGATGTC
TGTCAGGGTTCACCTTGGCATCAATTTGCCCTGAAACTTAGCTGTGCTGGGATTATTCTCCTTGTCTTGTTGTT
ACTGGGTTGAGTGTTTCAGTGACATCCTTAATACAGAAATCATCAATAGAAAAATGCAGTGTGGACATTCAACAG
AGCAGGAATAAAACAACAGAGAGACCGGGTCTCTTAAACTGCCCAATATATTGGCAGCAACTCCGAGAGAAATGC
TTGTTATTTTCTCACACTGTCAACCCTTGGAATAACAGTCTAGCTGATTGTTCCACCAAAGAATCCAGCCTGCTG
CTTATTGAGATAAGGATGAATTGATACACACACAGAACCTGATACGTGACAAAGCAATTCTGTTTTGGATTGGA
TTAAATTTTTCATTATCAGAAAAGAACTGGAAGTGGATAAACGGCTCTTTTTTAAATTCTAATGACTTAGAAATT
AGAGGTGATGCTAAAGAAAACAGCTGTATTTCCATCTCACAGACATCTGTGTATTCTGAGTACTGTAGTACAGAA
ATCAGATGGATCTGCCAAAAAGAACTAACACCTGTGAGAAATAAAGTGTATCCTGACTCTTGA

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FIGURE 918

MDQQAIYAE LNLP TD SGPESSSPSSLPRDVCQGSPWHQFALKLSCAGIILLVLVVTGLSVSVTSLIQKSSIEKCS
VDIQQSRNKTTTERPGLLNCP IYWQQLREKCLLF SHTVNPWNNSLADCSTKESLLLIRDKDELIHTQNLIRDKAI
LEWIGLNFSLSEKNWKWINGSFLNSNDLEIRGDAKENS CISISQTSVYSEYCS TEIRWICQKELTPVRNKVYPDS

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FIGURE 919

ATGACCATGGAAACAGTTGAATCCCAGCATGATGGAAGTATAACAGCTTCTTTGACAGAGAGCAAGTCTGCTCAT
GTGCAGACTCAGACTGGGCAAATTTCAATCCCTGCTTTAGCTCAGTGCAGTGAGCTGAGATCAGGCACCAGAAGA
GGCTCCCCAGCTGTAACCTCTAGTGCAGTTACCTTCGGGCCAAACTATACATGTCCAGGGAGTAATTCAGACACCA
CAGCCATGGGTTATTTCAGTCATCAGAAATACACACCGTTCAGGTAGCAGCAATTGCAGAGACAGATGAATCTGCA
GAATCAGAAGGTGTAATTGATTCTCATAAACGTAGAGAAATCCTTTCACGAAGACCCTCTTATAGGAAAATACTG
AATGAACCTGTCCTCTGATGTGCCTGGTGTTCCTAAGATTGAAGAAGAGAGATCAGAGGAAGAAGGAACACCACCT
AGTATTGCTACCATGGCAGTACCAACTAGCATATATCAGACTAGCACGGGGCAATACATTGCTATAGCCCAAGGT
GGAACAATCCAGATTTCTAACCCAGGATCTGATGGTGTTCAGGGACTGCAGGCATTAACAATGACAAATTCAGGA
GCTCCTCCACCAGGTGCTACAATTGTACAGTACGCAGCACAAATCAGCTGATGGCACACAGCAGTTCTTTGTCCCA
GGCAGCCAGGTTGTTGTTCAAGCTGCCACTGGTGACATGCCAACTTACCAGATCCGAGCTCCTACTGCTGCTTTG
CCACAGGGAGTGGTGATGGCTGCATCGCCCGGAAGTTTGACACAGTCCCCAGCAGCTGGCAGAAGAAGCAACACGC
AAACGAGAGCTGAGGCTAATGAAAAACAGAGAAGCTGCCCGGGAGTGTCGCAGGAAGAAGAAAGAATATGTCAAA
TGTCTTGAAAATCGTGTGGCTGTGCTTGAAAACCAAAACAAGACTCTCATTGAGGAACTCAAGGCCCTCAAAGAT
CTTTATTGCCATAAAGTAGAGTAACTGTCTTTGACTTGGACCTTGTTTTACTCTAATCAAGGCAGGAGATGCAGCA
GTCTTACTTATTGCCATGTGGACTTGTGGGAAGGACACGTGTGACCCTTAAGAATCCAGTTTGGATTAGTGTGTTG
AAATTGAATTGGGAATGTTGTTCCAGGATGTGGAATGCAGCGTGATCACACTTACCGAGCTTACTTTGATCTGTT
TGTC AATAGCATGCAAAAAATGCTTTGTTTGCCCTTTGCTTCTGCTTTTTTTTCAGGGAAGCTGCCAAAGAATGTC
GACGTCGAAAGAAAGAATATGTAAAATGCCTGGAGAGCCGAGTTGCAGTGCTGGAAGTCCAGAACAAGAAGCTTA
TAGAGGAACCTTGAAACCTTGAAAGACATTTGTTCTCCCAAACTGATTACTAGAAATATTTAACTATGAACTGAT
TACAGA

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FIGURE 920

MAVTGDETDEETDLAPSHMAAATGDMPTYQIRAPTTALPQGVVMAASPGSLHSPQQLAEEATRKRELRLMKNREA
AKECRRRKKEYVKCLESRVAVLEVQNKKLIEELETLDICSPKTD

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FIGURE 921

ATGAGACTTCTCATCCTGGCCCTCCTTGGCATCTGCTCTCTCACTGCATACATTGTGGAAGGTGTAGGGAGTGAA
GTCTCACATAGGAGGACCTGTGTGAGCCTCACTACCCAGCGACTGCCAGTTAGCAGAATCAAGACCTACACCATC
ACGGAAGGCTCCTTGAGAGCAGTAATTTTTATTACCAAACGTGGCCTAAAAGTCTGTGCTGATCCACAAGCCACG
TGGGTGAGAGACGTGGTCAGGAGCATGGACAGGAAATCCAACACCAGAAATAACATGATCCAGACCAAGCCAACA
GGAACCCAGCAATCGACCAATACAGCTGTGACCCTGACTGGCTAG

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FIGURE 922

MRLILALLGICSLTAYIVEGVGSEVSHRRTC VSLTTQRLPVSRIKTYTITEGSLRAVIFITKRGLKVCADPQAT
WVRDVVRSM DRKSNTNRNNMIQTKPTGTQQSTNTAVTLTG

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FIGURE 923

CACGTGGCTGCAGCGGGGCCAGAGCAGCAATGGCGGCGGGCGGGCGGGTAGCTGCGACCCCCTGGCCCCCTGCTG
GGGTCCCTTGCGCCTTCTCCCCGCACAGCCAGGCCTACTTCGCTTTGGCCTCTACCGACGGTCACTTACGAGTAT
GGGAGACGGCCAACAACCGGCTGCACCAGGAGTACGTGCCTTCCGCGCACCTCAGTGGTACCTGCACCTGTCTGG
CCTGGGCGCCAGCGCGGCTGCAGGCCAAGGAAAGTCCCCAGAGGAAAAAAGGAAATCAGAAGCTGTAGGAATGA
GTAACCAGACTGACTTATTGGCTCTTGGCACAGCAGTTGGTAGCATTTTATTATACAGCACAGTAAAGGAGAGT
TACACAGTAAATTAATAAGTGGTGGACATGACAACAGAGTCAACTGCATACAGTGGCATCAAGACAGTGGCTGTT
TATATAGTTGTTTCAGATGATAACATATTGTGGAATGGAACGTACAGACATGCAAAGTAAAGTGCAAATGGAAAG
GGGACAATAGCAGTGTGAGTTCCCTATGTATCAGCCCAGATGGAAAGATGTTGCTTTCAGCTGGTTCGAACAATCA
AACTATGGGTTTTTGGAGACCAAGAAGTCTACAGGCATTTTCACAGGACATGCAACGCCAGTTTCGTCACTGATGT
TCACTACCATCAGACCTCCTAATGAGAGCCAGCCCTTTGATGGAATTACAGGTCTTTATTTCTTATCTGGAGCAG
TACATGACCGGTTACTTAATGTCTGGCAGGTCCGATCAGAAAACAAAGAAAGAGTGCAGTGATGTCATTTACAG
TTACCGATGAACCTGTCTATATTGACTTAACTTTGTTCAGAAAACAAAGAGCCTGTCAAGTTGGCTGTTGTTT
GCAGAGATGGTCAAGTCCATCTTTTTGAACACATATTAAATGGGTACTGCAAAAAGCCTTTGACTTCAAACCTGCA
CAATTCAGATAGCAACACCTGGGAAAGGCAAGAAGTCAACACCAAACCCATCCCTATTCTAGCTGCTGGTTTTT
GCTCAGACAAAATGTCATTGTTGCTTGTATATGGCAGTTGGTTTCAGCCTACTATTGAGCGAGTGGCTTTAACT
CCAGAGAACCTCATATGTGTTTTAGTAAGAGATATTTCAAACCTGCTGGGCCCCCAAAGTAGAAACAGCTATAACAA
AGGTGAGGACACCAGTGATGAATTCGAAGCAAAAGTCTGGTGCCTGGGATTCCCTGGTTCATCATGCAGCTATCA
AGCCCGCTCCTCCACAAACCGAGCAAGTAGAGAGCAAGAGGAAGTCAGGGGGAAATGAGGTTAGCATTGAAGAAC
GTCTGGGAGCAATGGATATAGACACACAAAAAGGAAAGGAAGACCTCCAGACGAATAGCTTTCCAGTCTTC
TTACCCAGGGCTTAGAAAGTAACGATTTTGAAATGCTAAATAAAGTACTTCAAACCTAGGAATGTAAACCTTATAA
AGAAGACTGTATTAAGGATGCCCCCTGCATACTATTATTCGTTGTTACAAGAGCTTACAAAGAGGTTACAAGGAC
ATCCTAATAGTGCTGTGCTAATGGTTTCAGTGGCTAAAAATGTGTGTTAACAGTTCATGCATCATACTGTCCACGT
TGCCTGACCTGGTACCCAGCTGGGGACACTCTACCAGTTAATGGAAAGCAGAGTCAAACTTTTTCAGAACTTT
CACACCTTCATGGAAAGCTTATTCTTCTAATTACACAAGTAACAGCATCAGAGAAGACAAAGGGAGCAACTTCCC
CTGGACAGAAGGCAAAGTTGGTGTATGAAGAAGAGTCTTCTGAAGAGGAGTCTGATGATGAAATAGCAGATAAGG
ATTCTGAAGATAATTGGGATGAAGATGAGGAGGAGAGTGAAAGTGAAAAAGATGAGGACGTTGAAGAGGAAGATG
AGGATGCCGAAGGAAAAGATGAAGAAAATGGCGAGGACAGAGATACAGCAAGTGAAAAAGAATTAAATGGAGATT
CTGACTTAGATCCTGAAAATGAAAGTGAAGAAGAAATGAAGACAGCAAGCAAGCCGGTCAAACCTATATAAACTCT
GGCTCACCTTGCCAGTGGTGAGGGCTGCCTCTGTGCCAGGATGCCAAGGACCGCTGCACATTTCCAAATTCACA
GCAGTGGATCCCATGCCACTTTGCTGTCTGAGCACCCAGACTTGACTGTGTAAATAAGAGTGTTCATTCAAA
TGTTAATAAACTTTACACAGTATATAGACACATTTTCTGCAATGTACTGACATCAGTGTCCAATATATGGTATAT
TTTTATAATATAATATCCTAGTATGATTGGTTATATCAAGAATTGACAAGTGCAGATAAAGACCTTTCCCATAGG
AGTTCAAGAACTGGACTGTTGTGAAGAAGTCAGCTCTTATCTCAGGTTGGTATCTTTCATCAAAATCCAGATGCAA
AGCAGCACTAGTGAAAATTTTTTTAATTTAGTACATTTAATTTGGTACATTTTTCATAAAATATGAAGGGATAACT
ACAACTGGAGTAAAAATGATGGTAATTAATAAAAAATCCTCAGTATCCCTAGCTTGTCTATTAACTGTGATAATC
TGACTTGAGTCAGATTGAATATTTGGAGTGCTTCCCAGAATAACCACTTATTTTTGAAGCTATCATGTGAAGTA
TTTTTTTTAAACAAAACAAAATTTATGGTCATTAAAAACTAGAGAATTAGCCATATTAAGGATTTTTCTTGACT
GCAAATTACTTCTAAAGAATCATCAGTGTATAGATTAGAAGTGCTCATTACCTGCACTTTTAAAAAAATTCAG
TTATAGCTGCTTTTGAAGAGGTTTCCATTTTATTTAAATTACTAATGGATCAAAGAACAATTGTTTATTTTTC
TCTTTGGTTTTTAGATATTAATGATAACCTTGTGGAATTTTTTTTTCCAAAGAAAATATTTTTATAATTAATAAT
TTAATGTTTTTCTTCTTTTTCATTACCTACTCTGGCAGTGTTAGGGTATCTGTTTACCTTTAAATGATAAGTC
TCACTCAAGATTTTTTATCTATGTATAAATATTTTGGTGTGCTACAAAAGCCTTTACAAATTATCAGTAGTAGTT
TTTTTTTTTTTTTTTTTTTTTAAAGAATGAGCCGATATTGGCTTAGTGCTCACTAGGGGACATGCACATGGGAAGC
TCACCTCTAAGAAAGGGCTGGGCAGATGGATTTATTTTTTCCACCTGTGAATATGTAAAACAAAACCATTTATCT
TTGAGGGAGTTTTTAATACCAATGACAGAACAGAGATTTGTGTGCTCATCTTAAGAGCCAGAGCCATATAAGCAT
CTTGGGAAAGCAAGTTTGAACCAGCTGCTGGTGTAAATGTACAGTTATATTTGTCTATAAATGGAGCTGTTTATGG
CAATTTAATACCATTCTCTTTGTAAAGTGAATAAATATTCATCTTTTCCC

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FIGURE 924

RGCSGARAAMAAGGGGSCDPLAPAGVPCAFSPHSQAYFALASTDGHLRVWETANNRLHQEYVPSAHLSTCTCLA
WAPARLOAKESPQRKKRKSEAVGMSNQTDLLALGTAVGSILLYSTVKGELHSLISGGHDNRVNCIQWHQDSGCL
YSCSDDKHIVEWNVQTCKVKCKWKGDNSSVSSLCISPDGKMILLSAGRTIKLWVLETKEVYRHFTGHATPVSSLMF
TTIRPPNESQPFDGITGLYFLSGAVHDLRLNVWQVRSENKEKSAVMSFTVTDEPVYIDLTLSENKEEPVKLAVVC
RDGQVHLFEHILNGYCKKPLTSNCTIQIATPGKGKKSTPKPIPIAAGFCSDKMSLLLVIYGSWFQPTIERVALNS
REPHMCLVRDISNCWAPKVETAITKV RTPVMNSEAKVLVPGIPGHAAIKPAPPQTEQVESKRKSGGNEVSIEER
LGAMDIDTHKKGKEDLQTN SFPVLLTQGLSND FEMLNKVLQTRNVNL IKKT VLRMPLHTI IPL LQELTKRLQGH
PNSAVLMVQWLKCVLTVHASYLSTLPDLVPQLGTLYQLMESRVKTFQKLSHLHGKLILLITQVTASEKTKGATSP
GQKAKLVYEEESSEESDDEIADK DSEDNWDEDEE ESEKDEDVEEEDEDAEGKDEENGEDRDTASEKELNGDS
DLDPENEESEE

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FIGURE 925

GCCACTTGCAGTGATGTTTTGTTCTTCCCTAGCTCCTGCAGATACCTAAAGATAGTCCATAATCTTTTTGGGTCT
CACTTCTGCAAATTGGAGTTCATACTTGCCTATCTTTTGTGAAGAACCCTCAAGATAGTTGCAAAAAGTATTT
TGAAAAGTATAAAGTGATGGGTTTAATGTAAATGTTTTATTCAATACTACTATCCTCTAGACTAATTTGGTTGTA
GTTACATTACAGTAGCTGCTTCGTAAGTGATTTTGG

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FIGURE 926

ATCSDVLFPPSSCRYLKIVHNLFSGSHFCKLEFILALSFVEEPSR

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FIGURE 927

GAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAGACGAGAC
TCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAAATGCTCTCAGAGCAACC
GGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGTGATGTGG
AAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGCAACCCAT
CCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGCGCACAGCAGCAGTTTGGATGCCCCGGGAGGTGA
TCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCGACGAGTTTGAAGTACGGGTACCGGCGGGCATTCA
GTGACCTGACATCCCAGCTCCACATCACCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAATGAACTCT
TCCGGGATGGGGTAAACTGGGGTCGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGAAGCGTAG
ACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTAGAGCCTT
GGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAAGTCTATGGGAACAATGCAGCAGCCGAGAGCCGAAAGG
GCCAGGAACGCTTCAACCGCTGGTTCTGACGGGCATGACTGTGGCCGGCGTGTTCTGCTGGGCTCACTCTTCA
GTCGGAAATGACCAGACACTGACCATCCACTCTACCCTCCCACCCCCTTCTCTGCTCCACCACATCCTCCGTCCA
GCCGCCATTGCCACCAGGAGAACCCG

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FIGURE 928

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATAHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAMATYLNHLEPWIQENGWDTFVELYGNNAAAESRKGQERFNRWFLTGMTVAGVVL
LGSLSRK

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FIGURE 929

CGCCTCTTCACGGCACTGGGATCCGCATCTGCCTGGGATCATCAAGCCCTAGAAGCTGGGTTTCTTTAAATTAGG
GCTGCCGTTTTCTGTTTCTCCCTGGGCTGCGGAAAGCCAGAAGATTTTATCTAGCTTATACAAGGCTGCTGGTGT
TCCCTCTTTTTTTCCACGAGGGTGTTTTTGGCTGCAATTGCATGAAATCCCAATGGTG TAGACCAGTGGCGATGG
ATCTAGGAGTTTACCAACTGAGACATTTTTCAATTTCTTTCTTGTCATCCTTGCTGGGGACTGAAAACGCTTCTG
TGAGACTTGATAATAGCTCCTCTGGTGCAAGTGTGGTAGCTATTGACAACAAAATCGAGCAAGCTATGGATCTAG
TGAAAAGCCATTTGATGTATGCGGTCAGAGAAGAAGTGGAGGTCTCAAAGAGCAAATCAAAGAACTAATAGAGA
AAAATTCCAGCTGGAGCAGGAGAACAATCTGCTGAAGACACTGGCCAGTCCTGAGCAGCTTGCCCAGTTTCAGG
CCCAGCTGCAGACTGGCTCCCCCCTGCCACCACCCAGCCACAGGGCACCACACAGCCCCCGCCCAGCCAGCAT
CGCAGGGCTCAGGACCAACCGCATAGCTGCCTATGCCCCGCGAAGTGGCTGCTGCGTGTGAAC TGAACAGACG
GAGAAGATGTGCTAGGGAGAACTCTGCCTCCACAGTCACCCATTTTATTGCTCGCTGCGAAAGAGACGTGAGACTG
ACATATGCCATTATCTCTTTTCCAGTATTAAACACTCATATGCTTATGGCTTGGAGAAAATTTCTTAGTTGGGTGA
ATTAAAGGTTAATCCGAGAATTAGCATGGATATACCGGGACCTCATGCAGCTTGGCAGATATCTGAGAAATGGTT
TAATTCATGCTCAGGAGCTGTGTGCCTTTCCATCCCTTCCGGCTCCCTACCCCTCACTTCCAAGGGTTCTCTCTC
CTGCTTGCGCTTAGTGCTTACATGGGGTTGTGAAGCGATGGAGCTCCTCACTGGACTCGCCTCTCTCCTCTCCT
CCCCCAGGAGGAACCTTGAAAGGAGGGTAAAAAGACTAAAATGAGGGGGAACAGAGTTCACTGTACAAATTTGAC
AACTGTCACCAAAATTCATAAAAAACAATAGTACTGTGCCTCTTTCTTCTCAAACAATGGATGACACAAAACAT
GAGAGTGACAAAATGGTGACAGGTAGCTGGGACCTAGGCTATCTTACCATGAAGGTTGTTTTGCTTATTGTATAT
TTGTGTATGTAGTGTAATTTTTGTACAATAGAGGACTGTAATACTACTATTTAGGTTGTACAGATTGAAATTTAG
TTGTTTCATTGGCTGTCTGAGGAGGTGTGGACTTTTATATATAGATCTACATAAAAACTGCTACATGACAAAAAC
CACACCTAAACCCCTTTTAAGAATTTGGCACAGTTACTCACTTTGTGTAATCTGAAATCTAGCTGCTGAATACGC
TGAAGTAAATCCTTGTTCACTGAAGTCTTTCAATTGAGCTGGTTGAATACTTTGAAAAATGCTCAGTTCTAACTA
ATGAAATGGATTTCCAGTAGGGGTTTCTGCATATCACCTGTATAGTAGTTATATGCATATGTTTCTGTGCATGT
TCTCTACACAATTGTAAGGTGTCAGTGTATTTAACTGTTGCACTTGTCAACTTTCAATAAAGCATATAAATGTTG

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FIGURE 930

MKSQWCRPVAMDLGVYQLRHFSISFLSSLLGTENASVRLDNSSSGASVVAIDNKIEQAMD LVKSHLMYAVREEVE
VLKEQIKELIEKNSQLEQENLLKTLASPEQLAQFQAQLQTGSPATTQPQGTTPPAQPASQSGSPTA

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FIGURE 931

CAGAGGCAGGGAAAACACGCAGAAGCAGGAGCTGAAGACCTCAGACCGGCACCAGGACAGCTTAATGAAGACAA
ACTGAAGGGGAAACTGAGATCCTTAGAAAACAGCTATACACCTGTACCCAGAAATACTCCCCTTGGGGAATGAA
AAAAGTACTACTGGAGATGGAAGACCAGAAAAACAGCTATGAGCAGAAGGCCAAGGAGTCACTGCAGAAAGTGCT
GGAGGAGAAAATGAATGCAGAGCAGCAACTACAGAGCACACAGGTATGGGGATGCCACATAGACATGGGGCTGGG
GACTCCAGGCAGCTTGGGGAACAAGGGGAGCCAGCTGCACAACCTCCCTGGAGCCCTCTCCTCTCTGATCTCCCTC
AGCGATCCCTGGCCCTGGCAGAGCAGAAGTGTGAAGAGTGGAGGAGCCAGTATGAGGCTCTGAAGGAGGACTGGA
GGACCCCTTGGGACCCAGCACAGGGAGCTGGAGAGCCAACTCCACGTGCTTCAGTCCAACTGCAGGTACCAGGCA
CTGGGGGTGGGGAGGGGAAGACAGGGTATGGGGAGGAGGGATGGTGATGAAAAGAAGCTGTTCTGGATTAGGGACTC
CAAAGGCAGCTGACAGCATCTGGCTTTTCAGTTTCTCAGTCAACCACTACTTTGTACCAAATTCAGTGTCTGGCTC
TGAAATCTAATTTTGGAGTTTAGCAAGGATGTCTGCATTGCTCATGCAATGAACTAAGCGTTTATTGGAATGACA
CCATCACCACCCAAATGAAAAGAAGTGGCTGGAATATTTCATCAGCCTACTAATGTCATCTCCCAACCCACTCTCC
AAACTCCATCCCAAAAAAGCATCCAGTTTCAAGATTGCCCACTGTTGGCAAAGAAAGAATGTCATAATTTATTTA
CAGGTGAGTATTAACACTTTCTGCCAATGTGTATTTTAAGCAATTACATTTAGCAATTACAATTAGATTCTTGGC
ATCCTCAAGGGTTCCATCATCTTCAATCTGTCTAAGCCTCAGTTTCCCCATCTCTAGAATGAGGATAATAGTA
CCTACATCATAAGGTGGCTCTGAGTATTAAGTAAGATGATCCATGTCAAGCACTTAGCACAAATGCCTGGCACACA
AAAACACTCAGTAAATATTAGCTATTATTTTGCATAGATTATTTACCTGGTTTGGAAATTTGAGGATCCACCTC
AAAAGCTGATCTTTGTAATTTTCTGAAGCAGGGCTCAGAACAGCCCACTTGATAAGAGACAGAGTATGTGAGTC
TTATCAAAGGAGTGAACCCAGCTGGTCACTCTGCGTGGTATCCACAGCTCAACCTTTGTTGTTTTCTTCTTCCCA
TCACCTATAAGGCAACTCCTATGAAGATTTTGTGAGGGGTTTTTAACTTTAAATCTTTGTGGAAGAAAAAAGA
CCCTAACCAAAAAAAAGTACTGACAGTCCAGAAAGTAGAAAAAGAGAAATGAAACATCCAGAAAACTAATGACT
TTGTATTCTTAATTTGGTGATTTACCAAAGTGTCAAGACATGACTCCACACCAATGACAACCACTTACATTTT
CCCTAGAAATGGCAGATTTTTTAACGTACTGGGTTTTCTAAAGCAATTCTTATTTTATATATTCTAATTTATGTAC
ATGAATGTGTCACTTAGACCTGTCACTAGGGATGGTTTAGAAAAATAAATTACACTGCACATGCCTCAGTCCACT
TCAAAACTNN
NN
NNNNNNNNNNNNNNNNNNNNNAGACGCGAGTTCTTGTGAATATCAAAAGTCTAATCTGCTGTTATAAATATGAGGA
ACAAAGCAAAGGGAAGAAATAGGAAAAAGAAAGACTTCTCTATTTTCTCATCTCCCTAACATTCTCTTCTATCTC
TAAATTCAGACTTTTCTACATTTTCTCTTCCATGGTACCCGCCCCCAACCTCCACCCCAACACTGACCATC
CTTCTATATTGGCCCTCCTCCTCTTACAGGGAGCAGATAGCAGGGACTTACAGATGAACCAGGCCCTGCGATT
TTTGGAAATGAGCACCAGGAAGTGCAGGCCAAGATTGAATGCCTGCAAGGGGACAGAGACCTGTGCAGCTTGGAA
TACCCAGGACCTACAAGGTAATCTTCTCTTGGAGGCCTTGAGTGCATGGCAGCCATGGCCAAGTGAGCTAAGAA
AAAAGAACTGAATTAAGAGAAAGGCTTCAGCCTTTTATTTGTTTGCTTGATTGGTTGATTGGCTTTTATAATCTC
ATTTTACCTTGAGGGAGAGGCAGGACTGTTTTAATCATCCAAATGAAAATTAATTTCACTGTAGTAGATAGAG
TATCTTGTGTCTGAGCTCTCTTTTTTAGCCCATCCCTCTGGGCCAGATCACAGCTGCTCCACATCAGTCACAT
ATGTCAAGGCCACAGTCTTAATTTGAAAGGGAAAGGTCAGTTGAAACACAAGGCATAGAGAAAGTCTCTCAGTCA
CATCTCTGTGTCCGCTGATAGAGAGGACTAGATAGTGTGTAAACACAAGCCTCAATGCAACCAACATTGTTGA
TGCACAAAAACCTGAGGTACTTGGCTTCTGGTTTACCTCTTCAGAACTGGGACACGAAGATAGAGCAACTTCCAA
TAGACACACGTTAAAGACCATGACAAGACAGCATCTATTACTAATTTCCATCCTAAGTACTGAGTTTATTAGTC
TTGGGTTCTTTATTTTGGCTTGCAATTATGCAATTTTCAGATCAACTAAAAGGTCAGAGGCAGAGAACTCACC
CTGGTGACCAGAGTACAGCAGTTGCAGGGTTTGCTTCAAAATCAATCCTTACAGCTTCAAGAACAGGAGAACTC
TTAACAAAGAAAGGTCAGCAAATTTATTACCACAAATTTCTAAGATATTGCTCTTCTTACCTGCCTAGAGGCAG
CGGGATGGACTACATGACCTCCTGGAGTCCCAGCCAGTTCTGGGAGTCTGTAAAGTCCGGGATGTGTGGGAGCTT
TTTAAGGACTGATCATTGGCTCTGAGGACACTTCAACTAGTTAGCCTTCTATCTTGAGGTATATAAAGTGTGAAA
AGGGTTCTATTCTCTCTGAAAGCACATGTCT

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FIGURE 932

RGRENHAEAGAEDLRPAFGQLNEDKLKGKLRSLNQLYTCTQKYS PWGMKKVLLEMEDQKNSYEQKAKESLQKVL
EEKMNAEQQLQSTQVWGCHIDMGLGTPGSLGNKGSQ L HNSLEPSPL

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FIGURE 933

GTTGGAAATAACTATAACTTAAAGCAAATCTAACCCAGTAAGCTATCAAAAAGAAAAATTATATAATTACCAAGT
AGAGTTAATTTACCTGAGTTCTATGAACATATTCATTATTAAAGGAAACCTCAAATTATTGTCCATTGGAAGC
AAAATATACATTTATAAATAGCCATTTCTCGTTTTAAAAAACTAATAACATTGAAATAAACAGAACTTAAGCTC
TTCTAGTTTGCCAAAACCAGAAAGCAAACATCATATACTAAATGATGAAATGCCAAAGCCATTTCCATTATATC
AGAAACGAGACTAATACTTCTGTTCATCTTTACATGATTGTCACTATTATTAAGCATTGTTTTGGTAGTTCTAG
CCATTGCAGTAAGACAGTAGACAGAAAGTCAAATAATTGGCATAAATATTGGAAACAAAAAATTATTTCTACTTT
GAAATGATACAATAGAATAGCTGGAAAGCCCAGGGGGACTCTAGTAGAAAACAGCAATGAGGATTAAATGTAAGA
CACTTTGGAAAGCTGATGTGTGAGAAATGTACACAACTAATAGCTTTCTCTTTATTAGTAGTCATCAGTTGAAA
ATGGAAATGACCAAGCAAAAAATATTCAACAGAATGACAAACTATTGGTTACACCTAGGAATAAATGTGTTAAAG
AAAGGTACAGAGTGAAGGTAATGACCCTTATGAAGAAAACCTTGATATTATAAAAAAGTAGTCCTTTTCTCCCTCAG
TTTTTGTCTTCAAAATGTTTACTTGGGACAGATCGTGGTTTACATGATGGTCCTCAAACATATTGTGAACAACAT
TAAAAAAGACACATTTTACTCAATAAGTAACATTTTTTGAAGCTACTATGTGCTAGGGACCTAGTTTTTT
AGTGCAGTGGTCTCCAAAATAATGTACTGGCAGTATGGGAAGAGCGTTTAGAACACTGTACCTTTTTATTGGA
GGAGAAAAGAAACCTTTGTCAAATATTTAACACCTGCTGCCAGAGGTCTGTAGATTGTGATGATTGTGTGCCATGA
GTTACACACAGACTCCTAAATCAGTTTCACCTGTGGTGTCTCATTCTGTTTACTTTGAGCATTTTGCATTCTAT
ATCTGCTTAGTTATATGGATTTATTCGTCCCATATAATATGTGTAGCCACATGGACACATGTTTTAAAGGTTTT
AAATTCTGCAAGATAGTGACGATGATGTAAACACAAGAAAAGGGCAAATGGATACATTTTCCTACTCTGTGCTCA
TCAAACATATTACAGGATAAAATTATTGGCTATCTAATAAAAACACAGACTAATAAGACCTGATAAGTTGGACAA
AATGTTTTAAAAATTAACATGAAGATGATAGGAAGTATGAATCTATATTCACTGTCATTAATGTCAAACCTTTACC
TTATGGTATATTGTACTTTGAGAAATTA

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FIGURE 934

MSNLYLMVYCTLRN

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FIGURE 935A

AAAATTGCGTTTGAGTTTGCCGCGAGCCGGGCCAATCGGTTTTGCCAACGCATGCCACGTGCTGGCGAACAAAT
GTAAACACGGAGATCGTGTGCCGGGCACCTTGGTTTCGTGGTGGGCAACTGTGCTGCTGTTTCTTTTGGCCGCGGA
CAAGGTCGGCAGAGGTGGACCCCTGCTTGGGAGAGCTCTTCTCGCTGTGCTGACACCCGCCCTAACAGTCACCC
ACCCCGGGGAAATAATGGGGCTCGGAGGCCTCCTCCAGCCAGTGTCCAGCCTAAGCACATCGGCTCCCGCAGTT
CAGAAAGGTCCCGAGGCCCGAGTCACCATTTCCGGCTCAGACCTCGACCCGGAACGTGGCTGCCCACTGCCACGC
CCACTACGCCCCAGTGGCTCGCCCCAGGGGACGAGGGGCAAGAAGCGGCCTCCGAGGGCAGCGGCCGAAGGCCAT
TCGGTCCCTGGCTCTTCCAGCTCGCAGAGACCCGGAAGCGCTGCCCGGCCGCTGCCCTCTTCAGATCCCCCA
GCACCGGAGGAGCAGCGAGGGGGCTGCGTCCAGGCCGGCTTTCGGGTGGCTTAGGCGAATCCAGCTCTCTTTTG
CCCCCTCCAGAAGGCCAGCCCCGTCCGGGCGGTGTTCCGGCGCGCGCGGGCCGGGCCCCCGCCGCCCCAGGCT
CGCTCATAGGCCCGGAACACCACAGCCCGCCAGACTTGGCTGGCGCCGAGCCGGGGGTGGAGCCAGCGGGTTCC
CGCCAAAATCGCGTAGCTGGTCTTCCCCCGGGGCTACGTGCGGCCCTCCTTTTTTTTTTCAAACCCGGAGCTGC
ACTGGGATTGGTGGACTGGGCACTCACGTGGTTAACGGTCGCGGGAAGCCGCGGAGCCCGAACCTGAGACTGGAC
CTGAGGAGACCTCAGCCTCGGTGCTCGGGCCGCCCGCCTCTGCCGGAAGTCCGCGCCGCGCTGCCGCCACCG
TCCGCAGCCCGAGCGCCCCGAGCCGCAGGCCGCCGCGCAGAGACGCCGCGGCTGCGACTAGGCGCGCCCAG
CCGCACGTGGCGGACCCGCCCCAGGCCCGCAGTGTCTGGACCCCGCAGGCCTCCGCTCTCCTGTCTCGGCC
CGTCCCCAGGGCCGCGATGAGCTTCTGAGCCGACAGCAGCCGCCGCCACCCGCGCGCCGGGGCGGCCTGCAC
CTTGCGGCAGAAGCTGATCTTCTCGCCCTGCAGCGACTGTGAGGAGGAGGAAGAAGAGGAGGAGGAGGGCAG
CGGCCACAGCACCGGGGAGGACTCGGCCTTCAAGAGCCGACTCGCCGCTGCCGCCGCGCGGAGCCCCACGGA
GCCCCGGGCCGAGCGCCGCCGCTCGCCCCGGGCGGCCCGGGAGCCCCGGCGAGCTGGAGGAGGACCTGTTGCT
GCCCCGCGCTGCCCGGGCGCGGACGAGGCGGGCGGTGGGGCGGAGGGCGACTCGTGGGAGGAGGAGGGCTTCGG
CTCCTCGTCGCCGCTCAAGTCGCCGGCGGCCCTACTTCTGGGTAGCTCTTCTCGCCGGTGCCTGCGGCGG
CCCAGGAGATGCGTCGCCGCGGGGTGCGGGGCGCGCGGGCGGGCGAAGGCCGCGCTGCCCGCGGCCGACCA
CCCGGGCACCCCGCCACACAAGACCTTCCGCAAGCTGCGACTCTTCGACACCCCGCACACGCCCAAGAGTTTGCT
CTCCAAAGCTCGGGGAATTGATTCCAGCTCTGTTAACTCCGGGGTAGTTCTCTCTTCATGGATACAGAAAAATC
AGGAAAAAGGGAATTTGATGTGCGACAGACTCCTCAAGTGAATATTAATCCTTTTACTCCGGATTCTTTGTTGCT
TCATTCTCAGGACAGTGTGTCGTAGAAAGAGAACGTATTGGAATGATTCTGTGGTGAAGACATGGAAGCCAG
TGATTATGAGCTTGAAGATGAAACAAGACCTGCTAAGAGAATTACAATTACTGAAAGCAATATGAAGTCCCGGTA
TACAACAGAATTTATGAGCTAGAGAAAAATCGGCTCTGGAGAATTGGTTCGTATTTAAGTGTGTGAAGAGGCT
GGATGGATGCATTTATGCCATTAAGCGATCAAAAAAGCCATTGGCGGGCTCTGTTGATGAGCAGAACGCTTTGAG
AGAAGTATATGCTCATGCAGTGCTTGGACAGCATTCTCATGTAGTTCGATATTTCTCTGCGTGGGCAGAAATGA
TCATATGCTTATACAGAATGAATATTGTAATGGTGGAAGTTTAGCTGATGCTATAAGTGAAAACCTACAGAATCAT
GAGTTACTTTAAAGAAGCAGAGTTGAAGGATCTCCTTTTGCAAGTTGGCCGAGGCTTGAGGTATATTCATTCAAT
GTCTTTGGTTTACATGGATATAAAACCTAGTAATATTTTCATATCTCGAACCTCAATCCCAAATGCTGCCTCTGA
AGAAGGAGACGAAGATGATTGGGCATCCAACAAAGTTATGTTTAAATAGGTGATCTTGGGCATGTAACAAGGAT
CTCCAGTCCACAAGTTGAAGAGGGCGATAGTCGTTTTCTTGCAAATGAAGTTTTACAGGAGAATTATACCCATCT
ACCAAAAGCAGATATTTTTGCGCTTGCCCTCACAGTGGTATGTGCTGCTGGTGTGAACCTCTTCCGAGAAATGG
AGATCAATGGCATGAAATCAGACAGGGTAGATTACCTCGGATACCACAAGTGCTTTCCCAAGAATTTACAGAGTT
GCTAAAAGTTATGATTTCATCCAGATCCAGAGAGAAGACCTTCAGCAATGGCACTGGTAAAGCATTAGTATTGCT
GTCCGCTTCTAGAAAGAGTGCAGAACAAATTACGAATAGAATTGAATGCCGAAAAGTTCAAAAATTCATTTTACA
AAAAGAACTCAAGAAAGCACAGATGGCAAAAGCTGCAGCTGAGGAAAGAGCACTCTTCACTGACCGGATGGCCAC
TAGGTCCACCACCCAGAGTAATAGAACATCTCGACTTATTGGAAAGAAAATGAACCGCTCTGTGAGCCTTACTAT
ATACTGAGCTACTCTTTCCACCTCCCCCTGAACACTGTGACAAGAGGAAGCTAGGTTGAAATCACTGATAGAA
TCCAGTTTGCAATTACTTTCTCGATTGGTGTGAGTAGTTTTACTGATTAGGACTTTTATTGTGAATTACAGTTGA
AAGCTGTATTTTATGATTGCTATGTCAGGCTTTCATCTAATCTTACCAGTCTGTCTTCTGTAGGATGTGTCAC
GTTGGATGTTACACCAGCCTTTCCAGGGTTAACCACTGTGGTGGTGTGCTGCTTATAGTTTGCTGTTGCATTGTA
ATAAAAGGTGTCTTTCCCTGTAGTGACCTGTAAAAAGTACTCAAGGGCTTTATTACAGACATAACCTCCCTTTGA
AAAGGGACATGCTAAAAGACTCATTACTACTCAGCCTTCAATGTACCTGTGTGTCCATCTTATATTTCTTTTTT
TTTTTAATTGTGAATTAGACTTGTATATCCCACTGGGAGCACTTTGTAGGCATTGCATGAACCATGGGATGATGA

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FIGURE 935B

TTCTGTGGAGGTATTGCCTTGTGAATTTGCTGCTATTTTAGTTTTGTCTTTGCTGTAAACTTGTAGCATTAAACA
ATCATTGTTGTTAATAGGTCTTCTTTTTGAAACAATTATGTGAAATGTATAGCTGCTTTTGATGAAAAGCAGCTA
TTTGCCTTTTTTTTTTTTTTCCTTTGAACTTTGAAGCTAGTGCATTGGAAAAATGCACCCTTTCCCTCCTTTGGAAT
GCTGTATTAATGTAGTATAATAATTACTGGTTTTGTAACCTGTTCTGGTAATGTCCTTCCCGGACTCTTTTTAAA
TGTCTCCCCCTAAGTTTTATACTTGATTGTATTATTAGTCTGTTTTTAAATGTTTTGCCCGGTTTTCTCTTCAA
TATTTGTGTATATAAACCGATCTTCGTGATACTGTACATAGCTGTTTGAAATGCCAGAATGACTTCTGACATTCC
AAGTTTTTCACAAAATATATTTTATCTGTGATTAGCCATTTGACTAATAATACTGGCTAACAGATGTTGAAAAAA
ATTGCTGTTTGTTTTCTCATTAATTTTGGTCTAAAACATGTTTGCACCTTGCTTTGACTTGTGTTTTATTAACA
TTGATTGGCATATTAAAAGTCACTCTGAGCTT

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FIGURE 936

MSFLSRQQPPPPRRAGAACTLRQKLIFSPCSDCEEEEEEEEEEGSGHSTGEDSAFQEPDSPLPPARSPTEPGPER
RRSPGPAPGSPGELEEDLLLPGACPGADEAGGGAEGDSWEEEGFGSSSPVKSPAAPYFLGSSFSPVRCGGPGDAS
PRGCGARRAGEGRRSPRPDHPGTPPHKTFRKLRLFDTPHTPKSLLSKARGIDSSSVKLRGSSSLFMDTEKSGKREF
DVRQTPQVNINPFTPD SLLHSSGQCRRRKRTYWNDSCGEDMEASDYELEDETRPAKRITITESNMKSRYTTEFH
ELEKIGSGEFGSVFKCVKRLDGCIIYAIKRSKKPLAGSVDEQNALREVIYAHAVLGQHSVVRYFSAWAEDDHMLIQ
NEYCNGGSLADAI SENYRIMS YFKEAELKDLLLQVGRGLRYIHSMSLVHMDIKPSNIFISRTSIPNAASEEGDED
DWASNKVMFKIGDLGHVTRISSPQVEEGDSRFLANEVLQENYTHLPKADIFALALT VVCAAGAEPLPRNGDQWHE
IRQGRLPRI PQVLSQEFTELLKVMIHDPDPERRPSAMALVKHSVLLSASRKS AEQLRIELNAEKFKNSLLQKELKK
AQMAKAAAEERALFTDRMATRSTTQSNRTSRLIGKKMNRSVSLTIY

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FIGURE 937A

GAATTCGGCACGAGGTCACCCGGATAGGTAAAGGAAAACATGCCTGCCACACGGAAGCCAATGAGATATGGGCAT
ACAGAGGGACACACGGAGGTCTGTTTTGATGATTCTGGGAGTTTTATTGTGACTTGTGGAAAGTGATGGTGATGTG
AGGATTTGGGAAGACTTGGATGATGATGATCCTAAGTTCATTAATGTTGGAGAAAAGGCATATTCATGTGCTTTG
AAGAGTGGAAAACCTGGTCACTGCAGTTTCTAATAATACTATTCAAGTCCACACATTTCTGAAGGAGTTCAGAT
GGTATATTGACTCGCTTCACTACAAATGCAAACCATGTGGTCTTTAATGGGGATGGTACTAAAATTGCTGCTGGA
TCTAGTGATTTTCTAGTCAAAATTGTGGATGTGATGGATAGCAGCCAACAGAAAACATTTTCGAGGACATGATGCC
CCTGTTTTAAGTCTTTCTTTTGATCCTAAGGACATCTTTCTGGCATCAGCTAGTTGTGATGGATCTGTCAGAGTG
TGGCAAATTTTCAGATCAGACATGTGCTATTAGTTGGCCACTGCTACAAAATGCAACGATGTGATAAATGCAAAA
TCAATCTGCAGACTTGCTTGGCAGCCAAAAAGTGGGAAGTTACTGGCAATTCCTGTGGAAAAATCTGTTAAGCTA
TATAGAAGAGAATCTTGGAGTCATCAATTTGATCTTTTCAGATAATTTTCATCTCTCAGACCCCTCAATATAGTAACC
TGGTCTCCCTGTGGGCAATATTTAGCTGCAGGTAGTATTAATGGTCTAATCATAGTTTGAATGTGGAAACCAAA
GACTGCATGGAAAGGGTGAAACATGAGAAAAGGTTATGCAATTTGTGGTCTGGCATGGCATCCTACTTGTGGTCTGA
ATATCGTATACTGATGCGGAAGGAAATCTAGGGCTTCTAGAGAATGTTTGTGACCCAGTGGAAGACATCAAGC
AGTAAGGTATCTAGCAGAGTGGAAGGATTATAATGATCTTTTTGATGGAGATGATATGAGTAATGCTGGTGAT
TTTCTAAATGACAATGCAGTTGAGATCCCTTCTTTTCAAAGGGATTATAAATGATGATGAGGATGATGAAGAC
CTCATGATGGCTTCAGGTCTGCTCCTAGACAGCGAAGTCACATCCTAGAAGATGATGAAAACCTCAGTTGATATTTCA
ATGCTAAAAACTGGTTCTAGTCTTCTCAAAGAGGAGGAGGAAGATGGTCAAGAAGGCAGCATTACAAATCTACCA
CTTGTAACATCCCAAAGGCCATTTTATGATGGACCCATGCCAACTCCCCGGCAAAAGCCATTTTCAGTCAGGTTCT
ACACCGTTGCATCTCACTCACAGATTCATGGTGTGGAACCTATTGGAATTATTCGCTGCTATAATGATGAGCAA
GACAATGCCATAGATGTGGAGTTCCATGATACCTCCATACACCATGCAACACACTTATCAAACACTTTGAATTAT
ACAATAGCAGATCTTTCCACGAAGCTATTTTGTGGCATGTGAAAGCACTGATGAAGTAGCAAGCAAGCTTCAC
TGCTGCACTTTAGTTCTTGGGATTCAAGCAAAGAGTGGATAATAGACTTGCCTCAGAATGAGGATATTGAAGCC
ATATGTCTCGGTCAAGGATGGGCTGCTGCCGCTACTAGTGCCCTGCTTCTTCGATTGTTTACTATTGGAGGGGTT
CAAAAAGAGGTATTACGCCTTGCTGGACCTGTGGTGTCAATGGCAGGACATGGAGAACAGCTTTTCATTGTTTAT
CACAGAGGTACAGGATTTGATGGGGATCAGTGCCTTGGAGTTCAACTGCTAGAGCTGGGGAAAAAGAAAAACAA
ATTTTGCATGGTGACCCTCTTCTCTTACAAGGAAATCCTACCTTGATGGATTGGGTTTTTCAGCTGAAGGTACC
CCTTGTTACGTGGATTGAGAAGGAATTGTTGCAATGCTTAACAGAGGACTTGGTAATACGTGGACTCCTATATGT
AATACAAGAGAGCACTGCAAAGGAAATCTGATCACTACTGGGTGGTTGGTATCCATGAAATCCCAGCAACTA
AGGTGCATTCCTTGTAAGGTTCTCGGTTTCCCCCAACCCCTTCCACGCCCTGCTGTTGCTATATTATCCTTTAAG
CTTCTTACTGTGATTTGCAACAGAGAAAGGACAAATGGAGGAGCAATTTTGGCGTTCAGTTATATTTTACAAC
CACCTTGATTATTTAGCTAAAAATGGTTATGAATATGAAGAGAGCACTAAAAATCAAGCAACAAAGAGCAACAG
GAACTTTTAATGAAAATGCTTGCGCTTTCTTGTAAGTGGAGCGAGAATTCCGTTGTGTGGAACCTTGCTGATCTA
ATGACTCAAAATGCTGTGAATTTAGCCATTAAATATGCTTCTCGCTCTCGGAAATTAATACTGGCTCAAAAATA
AGTGAACCTGGCTGTAGAGAAGGCAGCCGAATTGACAGCAACCCAGGTGGAAGAGGAAGAAGAAGAAGATTTT
AGAAAAAGCTGAATGCTGGTTACAGCAATACTGCTACAGAGTGGAGCCAACCAAGGTTTCAGAAATCAAGTTGAA
GAAGATGCTGAGGACAGTGGAGAAGCTGATGATGAAGAAAACAGAAATACATAAGCCTGGACAGAACCTCGTTT
TCCAAAAGTACAAATTCCTCTGATGTTTCAGCTAAGTCAGGTGCAGTTACCTTTAGCAGCCAAGGACGAGTAAAT
CCCTTTAAGGTATCAGCCAGTTCCAAAGAACCAGCCATGTCAATGAATTCAGCACGTTCAACTAATATTTTAGAC
AATATGGGCAAATCATCCAAGAAATCCACTGCATTTAGTCGAACTACAAATAATGAAAAGTCTCCCATTATAAAG
CCTCTGATTCCAAAGCCGAAGCCTAAGCAGGCATCTGCAGCATCTATTTCCAGAAAAGAAATTCCTCAAACATAAT
AAAACCTGAGGAAGTGAAAGAAGAAAATCTTAAAAATGTATTATCTGAAACCCAGCTATATGTCTCCTCAAAC
ACTGAAAACCAAAGGCCAAAGACCGGGTTCCAGATGTGGTTAGAAGAAAATAGAAGTAATATTTTGTCTGACAAT
CCTGACTTTTTAGATGAAGCAGACATAATAAAGAAGGAATGATTGATTTAGAGTATTGTCAACTGAAGAAAGA
AAGGTGTGGGCTAACAAAGCCAAAGGAGAAACGGCAAGTGAAGGAACCTGAAGCAAGAAGCGAAAACGTGTGGTT
GATGAAAGTGATGAACAGAAAACAGGAAGAAAAGCAAAAGAGAACCTGAATTTGTCTAAAAAGCAGAAACCT
TTAGATTTTTCTACAAATCAGAACTATCAGCTTTTGCATTTAAGCAGGAGTAAAGGAAGAAAGTGACCCTAGGG
AAGTAATGGATTTTTTTTTTACTCATCTTTGAATATAGACTCGAGTCTTTGGGAAACTCATTATATATATATTTTT
AAAGAGTTTGAAGCAACTGTTTGTCTTTATAAGATAATGTAGTAATTATATTGGTGTAGGTAACAGGACATATGT

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FIGURE 937B

AAAAACTATCATCTTTGCAGATTACTCTGCCTCCAAATGCAGGGCCTTTCAGAGATGCATTGTGATTGTAATTAC
TGAGTTGAAGCTCCAACCAATTTGAATTTGTTTCTTAACCTTGAAAAATCATTAAAGCCAAGGTATTAAAACCTT
TGTGCATTAATACCTTCTAGGGGTTTGGTTCATTTGGTTTTTGTGATGTGCAAGGAAGGACAATAGTCCTCTTTC
CAAGTGTGTTAGCATAGACTTCTCTATATGTTTCTACTAGACCTAGGGGATGACGTCTTTTAATAATACTGGCCC
TAAACATGTAAATAATCTTGTAGGTGAGACTTTTTCTTTTGTGTTTCGGAAATTCCTATGTGGCTTTCAGTTGT
CTGTTTGTATAGCCTGGATTTTTTTTGAGGTAAATGAAACTTCTCATTGTAAAAAAAAAAAAAAAAAACTCGAG

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FIGURE 938

MPATRKPMRYGHTEGHTEVCFDDSGSFIVTCGSDGDVRIWEDLDDDDPKFINVGEKAYSCALKSGKLVTAVSNN
IQVHTFPEGVPDGILTRFTTNANHVVFNFGDGTKIAAGSSDFLVKIVDVMDSQQKTFRGHDAVLSLSFDPKDI
LASASCDGSVRVWQISDQTCAISWPLLQKCNDVINAKSICRLAWQPKSGKLLAIPVEKSVKLYRRESWSHQFDLS
DNFISQTLNIVTWSPCGQYLAAGSINGLIIVWNVETKDCMERVKHEKGYAICGLAWHPTCGRISYTD AEGNLGLL
ENVCDPSGKTSSSKVSSRVEKDYNLDFDGDDMSNAGDFLNDNAVEIPSFSGKIINDEDEDLMMASGRPRQRSH
ILEDDENSVDISMLKTGSSLLKEEEDGQEGSIHNLPLVTSQRPFYDGPMPTPRQKPFQSGSTPLHLTHRFMVWN
SIGIIRCYNDEQDNAIDVEFHDTSIHHATHLSNTLNYTIADLSHEAILLACESTDELASKLHCLHFSSWDSSKEW
IIDLPQNEIDIEAICLGQGWAAAATSALLRLFTIGGVQKEVFSLAGPVVSMAGHGEQLFIVYHRGTGFDGDQCLG
VQLLELGKKKKQILHGDPLPLTRKSYLAWIGFSAEGTPCYVDSEGIVRMLNRGLGNTWTPICNTREHCKGKSDHY
WVVGIIHENPQQLRCIPCKGSRFPPTLPRPAVAILSFKLPYCQIATEKGQMEEQFWRSVIFHNHLDYLAKNGYEYE
ESTKNQATKEQQELLMKMLALSCKLEREFRCVELADLMTQNAVNLAIKYASRSRKLILAQKLSELAVEKAAELTA
TQVEEEEEEEEDFRKKLNAGYSNTATEWSQPRFRNQVEEDAEDSGEADDEEKPEIHKPGQNSFSKSTNSSDVSAKS
GAVTFSSQGRVNPFKVSASSKEPAMSMNSARSTNILDNMGKSSKKSTALSRTTNNEKSPIIKPLIPKPKPKQASA
ASYFQKRNSQTNKTEEVENLKNVLSETPAICPPQNTENQRPKTGFMWLEENRSNLSNPDFSDEADIKEG
MIRFRVLSTEERKVVWANKAKGETASEGTEAKKRKRVDDESDETENQEEKAKENLNLSKKQKPLDFSTNQKLSAFA
FKQE

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FIGURE 939

CTTGTCTCCCCTGGTTTGTGAAGTGC GGAAAACCAGAGGCGCAGTCATGTCGGGATTTCGACGATCCTGGCATT
CTACAGCGACAGCTTCGGGGGCGACGCCAGGCCGACGAGGGGCAGGCCCGCAAATCGCAGCTGCAGAGGCGCTT
CAAGGAGTTCTTGC GGCGAGTACCGAGTGGGCACCGACCGCACGGGCTTCACCTTCAAATACAGGGATGAACTCAA
GCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGAGATGGAGGATCTGGCCAGCTTTGATGAGGACCTGGC
CGACTACTTGTACAAGCAGCCAGCCGAGCACCTGCAGCTGCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGT
GACCCGGCCCCGGCCTTCTGGGGAGGAGGTGCTCCAGGACATCCAGGTCATGCTCAAGTCGGACGCCAGCCCTTC
CAGCATTTCGTAGCCTGAAGTCGGACATGATGTACACCTGGTGAAGATCCCTGGCATCATCATCGCGGCCCTCTGC
GGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCGCGAGCTGCCGCAACACCCTCACCAACATTGCCATGCG
CCCTGGCCTCGAGGGCTATGCCCTGCCAGGAAGTGCAACACAGATCAGGCTGGGCGCCCCAAATGCCCATTTGGA
CCCGTACTTTCATCATGCCCGACAAATGCAAATGCGTGGACTTCCAGACCCTGAAGCTGCAGGAGCTGCCTGATGC
AGTCCCCCACGGGGAGATGCCAGACACATGCAGCTCTACTGCGACAGGTACCTGTGTGACAAGGTCGTCCCTGG
GAACAGGGTTACCATCATGGGCATCTACTCCATCAAGAAGTTTGGCCTGACCACCAGCAGGGGCGGTGACAGGGT
GGGCGTGGGCATCCGAAGCTCCTACATCCGTGTCTGGGCATCCAGGTGGACACAGATGGCTCTGGCCGCAGCTT
TGCTGGGGCCGTGAGCCCCAGGAGGAGGAGGAGTTCCGTGCGCTGGCTGCCCTCCCAAATGTCTATGAGGTCAT
CTCCAAGAGCATCGCCCCCTCCATCTTTGGGGGCGACAGACATGAAGAAGGCCATTGCCTGCCTGCTCTTTGGGGG
CTCCCGAAAGAGGCTCCCTGATGGACTTACTCGCCGAGGAGACATCAACCTGCTGATGCTAGGGGACCCTGGGAC
AGCCAAGTCCCAGCTTCTGAAGTTTGTGGAGAAGTGTTCTCCCATTTGGGGTATACACGTCTGGGAAAGGCAGCAG
CGCAGCTGGACTGACAGCCTCGGTGATGAGGGACCCTTCGTCCCGGAATTTTCATCATGGAGGGCGGAGCCATGGT
CCTGGCCGATGGTGGGGTCTGTCTGTATTGACGAGTTTGACAAGATGCGAGAAGATGACCGTGTGGCAATCCACGA
AGCCATGGAGCAGCAGACCATCTCTATCGCCAAGGCTGGGATCACCACCACCCTGAACCTCCCGCTGCTCCGTCTT
GGCTGCTGCCAACTCAGTGTTTCGGCCGCTGGGATGAGACGAAGGGGGAGGACAACATTGACTTCATGCCCAACAT
CTTGTGCGCTTCGACATGATCTTCATCGTCAAGGATGAGCACAATGAGGAGAGGGATGTGATGCTGGCCAAGCA
TGTCATCACTCTGCACGTGAGCGCACTGACACAGACACAGGCTGTGGAGGGCGAGATTGACCTGGCCAAGCTGAA
GAAGTTTATTGCCTACTGCCGAGTGAAATGTGGCCCCCGGCTGTCAGCAGAGGCTGCAGAGAACTGAAGAACCG
CTACATCATCATGCGGAGCGGGGCGGTCAGCACGAGAGGGACAGTGACCGCCGCTCCAGCATCCCCATCACTGT
GCGGCAGCTGGAGGCCATTGTGCGCATCGCGGAAGCCCTCAGCAAGATGAAGCTGCAGCCCTTCGCCACAGAGGC
AGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTGTCACGTTGGATGCTGCCTTGTCCGGTACCCTGTGAGGGGT
GGAGGGCTTCACCAGCCAGGAGGACCAGGAGATGCTGAGCCGCATCGAGAAGCAGCTCAAGCGCCGCTTTGCCAT
TGGCTCCCAGGTGTCTGAGCACAGCATCATCAAGGACTTCACCAAGCAGAAATACCCGGAGCACGCCATCCACAA
GGTGCTGCAGCTCAIGCTGCGGCGCGGCGAGATCCAGCATCGCATGCAGCGCAAGGTTCTCTACCGCTCAAGTG
AGTGCGCGCGCCTCACTGGACTCATGGACTCGCCACGCCTCGCCCCCTCTGCCGCTGCCTGCCATTGACAATGT
TGCTGGGACCTCTGCCTCCCCACTGCAGCCCTCGAACTTCCCAGGCACCCTCCTTTCTGCCCCAGAGGAAGGAGC
TGTAGTGCTCTGCTGCTCTGGGCGCCGCTCTAGCGCGGTTCTGGGAAGTGTGCTTTTGGCATCCGTTAATAA
TAAAGCCACGGTGTGTTCAGGTAAAAAAAAAAAAAAAAA

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FIGURE 940

MSGFDDPGIFYSDSFGGDAQADEGQARKSQLQRRFKEFLRQYRVGTDRTGFTFKYRDELKRHYNLGEYWIEVEME
DIASFDEDLADYLYKQPAEHLQLLEEAAKEVADEVTRPRPSGEEVLQDIQVMLKSDASPSSIRSLKSDMMSHLVK
IPGIIIAASAVRAKATRISIQCRSCRNTLTNIAMRPGLEGYALPRKCNTDQAGRPKCLDPYFIMPDKCKCVDFQ
TLKLQELPDAPVPHGEMPRHMQLYCDRYLCDKVVPGNRVTIMGIYSIKKFGLTTSRGRDRVGVGIRSSYIRVLGIQ
VDTDGSGRSFAGAVSPQEEEFRRLLAALPNVYEVISKSIAPSIFFGGTDMKKAIACLLFGGSRKRLPDGLTRRGI
NLLMLGDPGTAKSQLKFVEKCSPIGVYTSKGSSAAGLTASVMRDPSSRNFIMEGGAMVLADGGVVCIDEFDKM
REDDRVAIHEAMEQQTISIAGITTTLNSRCSVLAAANSVFGRWDETKGEDNIDFMPTILSRFDMIFIVKDEHN
EERDVMLAKHVITLHVSALTQTQAVEGEIDLAKLKKFIAYCRVKCGPRLSAEAAEKLKNRYIIMRSGARQHERDS
DRRSSIPITVRQLEAIVRIAELSMMKLQPFATEADVEEALRLFQVSTLDAALSGTSLSGVEGFTSQEDQEMLSRI
EKQLKRRFAIGSQVSEHSIIKDFTKQKYPEHAHKKVLQMLLRGEIQHRMQRKVLYRLK

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FIGURE 941

GAATTCGGGCGTGGGCGCGGGGGCGCGGCGTGCGGCACGCTGCAGGGCTGAAGCGGCGGCGGCGGTGGGGACTGC
ACGTAGCCCGGCGCTCGGCATGGCTCTCCTGGTGCTCGGTCTGGTGAGCTGTACCTTCTTTCTGGCAGTGAATGG
TCTGTATTCTCTAGTGATGATGTGATCGAATTAAGTCCATCAAATTTCAACCGAGAAGTTATTCAGAGTGATAG
TTTGTGGCTTGTAGAATTCTATGCTCCATGGTGTGGTCACTGTCAAAGATTAACACCAGAATGGAAGAAAGCAGC
AACTGCATTAAAAGATGTTGTCAAAGTTGGTGCAGTTGATGCAGATAAGCATCATTCCCTAGGAGGTCAGTATGG
TGTTCAAGGATTTCTTACCATTAAAGATTTTTGGATCCAACAAAAACAGACCAGAAGATTACCAAGGTGGCAGAAC
TGGTGAAGCCATTGTAGATGCTGCGCTGAGTGCTCTGCGCCAGCTCGTGAAGGATCGCCTCGGGGGACGGAGCGG
AGGATACAGTTCTGGAAAACAAGGCAGAAGTGATAGTTCAAGTAAGAAGGATGTGATTGAGCTGACAGACGACAG
CTTTGATAAGAATGTTCTGGACAGTGAAGATGTTTGGATGGTTGAGTTCTATGCTCCTTGGTGTGGACACTGCAA
AAACCTAGAGCCAGAGTGGGCTGCCGCAGCTTCAGAAGTAAAAGAGCAGACGAAAGGAAAAGTGAACTGGCAGC
TGTGGATGCTACAGTCAATCAGGTTCTGGCCTCCCGATACGGGATTAGAGGATTTCTTACAATCAAGATATTTCA
GAAAGGCGAGTCTCCTGTGGATTATGACGGTGGGCGGACAAGATCCGACATCGTGTCCCGGGCCCTTGATTTGTT
TTCTGATAACGCCCCACCTCCTGAGCTGCTTGAGATTATCAACGAGGACATTGCCAAGAGGACGTGTGAGGAGCA
CCAGCTCTGTGTTGTGGCTGTGCTGCCCCATATCCTTGATACTGGAGCTGCAGGCAGAAATTCTTATCTGGAAGT
TCTTCTGAAGTTGGCAGACAAATACAAAAGAAAATGTGGGGGTGGCTGTGGACAGAAGCTGGAGCCCAGTCTGA
ACTTGAGACCGCGTTGGGGATTGGAGGGTTTGGGTACCCCGCCATGGCCGCCATCAATGCACGCAAGATGAAATT
TGCTCTGCTAAAAGGCTCCTTCAGTGAGCAAGGCATCAACGAGTTTCTCAGGGAGCTCTCTTTTGGGCGTGGCTC
CACGGCACCTGTAGGAGGCGGGGCTTTCCCTACCATCGTTGAGAGAGAGCCTTGGGACGGCAGGGATGGCGAGCT
TCCCGTGGAGGATGACATTGACCTCAGTGATGTGGAGCTTGATGACTTAGGGAAAGATGAGTTGTGAGAGCCACA
ACAGAGGCTTCAGACCATTTTCTTTCTTGGGAGCCAGTGGATTTTCCAGCAGTGAAGGGACATTCTCTACTTT
CTTTTCTTGGGAGCCAGTGGATTTTCCAGCAGTGAAGGGACATTCTCTACACTCAGATGACTCTACCAGTGGCC
TTTTAACCAAGAAGTAGTACTTGATTGGTCATTTGAAAACACTGCAACAGTGAACTTTTGCATCTCAAGAAAACA
TTGAAAATTCTATGAATTGTTGTAGCCGGTGAATTGAGTCGTATTCTGTACATAATATTTTGAAGAAAACCTG
GCTGTGCAACATTTTCTCTCTGACTGCTGCTTGAATGTTCTTGGAGGCTGTTTCTTATGTATGGGTTTTTTTT
AATGTGATCCCTTCATTTGAATATTAATGGCTTTTTCCATTAAAGAATAAATTGGAAAAAAGAAAAAAAAAAAAA
GGAATTC

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FIGURE 942

MALLVLGLVSCITFFLAVNGLYSSSDVIELTPSNFNREVIQSDSLWLVEFYAPWCGHCQRLTPEWKKAATALKDV
VKVGAVDADKHHS LGGQYGVQGFP TIKIFGSNKNRPEDYQGGRTGEAIVDAALSALRQLVKDRLGGRSGGYSSGK
QGRSDSSSKKDVIELTDDSF DKNVLDS EDVMMVEFYAPWCGHCKNLEPEWAAAASEVKEQTKGKV KLA AVDATVN
QVLASRYGIRGFPTIKIFQKGESPV DYGGRTRSDIVSRALDLFSDNAPPPELLEI INEDIAKRTCEEHQLCVVA
VLPHILDTGAAGRNSYLEVLLKLADKYKKKMWGLWTEAGAQSELETALGIGGFGYPAMAAINARKMKFALLKGS
FSEQGINEFLRELSFGRGSTAPVGGGAFPTIVEREPWDGRDGELPVEDDIDLSDVELDDLKDEL

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FIGURE 943

GC GACCGCTCGTCCGCCCCGGCTTGAGGCCCGCGGGGAGCGCGCCGCAATTCGTTCGGCCCCGCGGGGGGGCGGCCTC
CCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGGCTGGGATGGCGCGTCCGCGGGCCCCGCGAGTA
CAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGCACTGGCCGCGCCGGATTGATGAACTCCCAGA
GGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTTTTGGCACCCATGAACTGCATTTCTAGGTCC
CAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAAAGTCAAACAAACGGAAAGGATTTAACGAAGG
ATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCTACCAGGCAATTCAGCAACAGAGCTCTTCAGA
AACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGGAAGAAGGTGATAGAGTAGAAGAAGATGGAAA
AGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGTCATATACTTCAAAGAAATCCTCTAAACAGTC
CCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAGAGGAAAAACAAAGCAGCTCTGAGGGTGGAGA
TGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGACAGAAAACCAGTGAAGGGACCTTAACTACCATAATGAAT
GCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTGTCTAATATTCTTGGATTTGATATGAACCAAC
ACATAGTCCTTGTGTGTCATTGACAGAACCCAGTTTGTATGTACATTATTCATATTCCTCTCTGTTGTGTTTCGG
GGGGAAAAGACATTTTAGCCTTTTTTAAAAGTTACTGATTTAATTTTCATGTTATTTGGTTGCATGAAGTTGCCCT
TAACCACTAAGGATTATCAAGATTTTTGCGCAGACTTATACATGTCTAGGATCCTTTTATCAAGGCAGTTATGAT
CATCGTTTTCTGCTTGCCTTGACCCCAACCATCATCAAACACTCAGTTAAATATAAATTAACATTTTTTAGATGACCAC
TCAACATAATGCTTAAGAATGGAATTTCTCTCTGTGACAGAACCCAGGAATTAATTCCTAAATACATAACGTTG
GTATATTGAAGACGAAATTAATAATTGGTCCTTCAGTTTTGAGGCCATGTGTAAAGTTTAACCATATTGTAATAA
TCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCAACATTTCATATTGTTATGTACACAACTAAG
TTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAATAAAGGCAATGATTTATTTTTTTCCAGTGC
CAATACAATTTTGAGCTAAGCACTCAAGGTGGATACTTTACATTTTAAAGCTGGAATCAGCAACAGCCCTATGGG
AAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAAACTGTTTTCTTTTGGAACTACAATTAGAAT
AGTTAATATTCATCCTTAAACCATTATTATGTGTACATTATTGTTGCTATTGTGATAATAGAGAATTTTATTTAT
TTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGGTTTTATCAATCCTGTTAATGCTTGTCTTG
GAACATCTTTCGCGTATTACGGTTTGTAGTTGAAAAGTTTACTGTAAAAAATCAAAAACAAAAAATGTATTG
TTTTTACAGAATAAATTTATTGGAATGTGA

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FIGURE 944

MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPVGKFTGYQAIQQSSSETEGEGGNTADASSEEEGDRVEEDGKGKRNKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEEENKSSSEGGDAGNDTRNTTSDLQKTSEGT

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FIGURE 945A

AATTCTCGAGCTCGTTCGACCGGTTCGACGAGCTCGAGGGTTCGACGAGCTCGAGGGCGCGCGCCCGGCCCCACCCC
TCGACGACACCCCGCGCCCCGCGCCCTCCCAGCCGGGTCCAGCCGGAGCCATGGGGCCGGAGCCGAGTGCAGCACC
ATGGAGCTGGCGGCCTTGTGCCGCTGGGGGCTCCTCCTCGCCCTCTTGCCCCCGGAGCCGCGAGCACCACAGTG
TGCACCGGCACAGACATGAAGCTGCGGCTCCCTGCCAGTCCCGAGACCCACCTGGACATGCTCCGCCACCTCTAC
CAGGGCTGCCAGGTGGTGCAGGGAAACCTGGAACCTACCTACCTGCCCCACCAATGCCAGCCTGCTCTTCTGCAG
GATATCCAGGAGGTGCAGGGCTACGTGCTCATCGCTCACAACCAAGTGAGGCAGGTCCCACTGCAGAGGCTGCGG
ATTGTGCGAGGCACCCAGCTCTTTGAGGACAATATGCCCTGGCCGTGCTAGACAATGGAGACCCGCTGAACAAT
ACCACCCCTGTACAGGGGCTCCCCAGGAGGCTGCGGGAGCTGCAGCTTCGAAGCCTCACAGAGATCTTGAAA
GGAGGGGTCTTGATCCAGCGGAACCCCCAGCTCTGCTACCAGGACACGATTTTGTGGAAGGACATCTTCCACAAG
AACAACCAGCTGGCTCTCACACTGATAGACACCAACCGCTCTCGGGCCTGCCACCCCTGTTCTCCGATGTGTAAG
GGCTCCCGCTGCTGGGGAGAGAGTTCTGAGGATTGTGAGAGCCTGACGCGCACTGTCTGTGCCGGTGGCTGTGCC
CGCTGCAAGGGGCCACTGCCCACTGACTGCTGCCATGAGCAGTGTGCTGCCGGCTGCACGGGCCCCAAGCACTCT
GACTGCCTGGCCTGCCCTCCACTTCAACCACAGTGGCATCTGTGAGCTGCACTGCCAGCCCTGGTACCTACAAC
ACAGACACGTTTGAGTCCATGCCCAATCCCGAGGGCCGGTATACATTGCGCGCCAGCTGTGTGACTGCCTGTCCC
TACAACCTACCTTTCTACGGACGTGGGATCCTGCACCCTCGTCTGCCCCCTGCACAACCAAGAGGTGACAGCAGAG
GATGGAACACAGCGGTGTGAGAAGTGACAGCAAGCCCTGTGCCCCGAGTGTGCTATGGTCTGGGCATGGAGCACTTG
CGAGAGGTGAGGGCAGTTACCAAGTGCCAATATCCAGGAGTTTGCTGGCTGCAAGAAGATCTTTGGGAGCCTGGCA
TTCTGCCCGAGAGCTTTGATGGGGACCCAGCCTCCAACACTGCCCCGCTCCAGCCAGAGCAGCTCCAAGTGTTC
GAGACTCTGGAAGAGATCACAGGTTACCTATACATCTCAGCATGGCCGACAGCCTGCCTGACCTCAGCGTCTTC
CAGAACCTGCAAGTAATCCGGGGACGAATTCTGCACAATGGCGCCTACTCGCTGACCCTGCAAGGGCTGGGCATC
AGCTGGCTGGGGCTGCGCTCACTGAGGGAACCTGGGCAGTGGACTGGCCCTCATCCACCATAACACCCACCTCTGC
TTCGTGCACACGGTGGCTGGGACCACTCTTTTCGGAACCCGCACCAAGCTCTGCTCCACACTGCCAACCGGCCA
GAGGACGAGTGTGTGGGCGAGGGCCTGGCCTGCCACCAGCTGTGCGCCCCGAGGGCACTGCTGGGGTCCAGGGCCC
ACCCAGTGTGTCAACTGCAGCCAGTTCCTTCGGGGCCAGGAGTGCCTGGAGGAATGCCAGTACTGCAGGGGCTC
CCCAGGGAGTATGTGAATGCCAGGCACTGTTTGCCGTGCCACCCTGAGTGTGAGCCCCAGAATGGCTCAGTGACC
TGTTTTGGACCGGAGGCTGACCAGTGTGTGGCCTGTGCCCACTATAAGGACCCCTCCCTTCTGCGTGGCCCCGCTGC
CCCAGCGGTGTGAAACCTGACCTCTCCTACATGCCCATCTGGAAGTTTCCAGATGAGGAGGGCGCATGCCAGCCT
TGCCCCATCAACTGCACCCACTCCTGTGTGGACCTGGATGACAAGGGCTGCCCCGCGGAGCAGAGAGCCAGCCCT
CTGACGTCCATCGTCTCTGCGGTGGTTGGCATTCTGCTGGTCTGCTGGTCTTGGGGGTGGTCTTTGGGATCCTCATC
AAGCGACGGCAGCAGAAGATCCGGAAGTACACGATGCGGAGACTGCTGCAGGAAACGGAGCTGGTGGAGCCGCTG
ACACCTAGCGGAGCGATGCCCAACCAGGCGCAGATGCGGATCCTGAAAGAGACGGAGCTGAGGAAGGTGAAGGTG
CTTGGATCTGGCGCTTTTGGCACAGTCTACAAGGGCATCTGGATCCCTGATGGGGAGAATGTGAAAATTCCAGTG
GCCATCAAAGTGTGAGGGAAAACACATCCCCCAAAGCCAACAAAGAAATCTTAGACGAAGCATACGTGATGGCT
GGTGTGGGCTCCCCATATGTCTCCCGCCTTCTGGGCATCTGCCCTGACATCCACGGTGCAGCTGGTGACACAGCTT
ATGCCCTATGGCTGCCTCTTAGACCATGTCCGGGAAAACCGCGGACGCCTGGGCTCCCAGGACCTGCTGAACTGG
TGTATGCAGATTGCCAAGGGGATGAGCTACCTGGAGGATGTGCGGCTCGTACACAGGGACTTGGCCGCTCGGAAC
GTGCTGGTCAAGAGTCCCAACCATGTCAAAATTACAGACTTCGGGCTGGCTCGGCTGCTGGACATTGACGAGACA
GAGTACCATGCAGATGGGGGCAAGGTGCCCATCAAGTGGATGGCGCTGGAGTCCATTCTCCGCCGGCGGTTCCACC
CACCAGAGTGATGTGTGGAGTTATGGTGTGACTGTGTGGGAGCTGATGACTTTTGGGGCCAAACCTTACGATGGG
ATCCCAGCCCGGGAGATCCCTGACCTGCTGGAAGAGGGGGAGCGGCTGCCCCAGCCCCCATCTGCACCATTGAT
GTCTACATGATCATGGTCAAATGTTGGATGATTGACTCTGAATGTGCGCCAAGATTCCGGGAGTTGGTGTCTGAA
TTCTCCCGCATGGCCAGGGACCCCCAGCGCTTGTGGTTCATCCAGAATGAGGACTTGGGCCAGCCAGTCCCTTG
GACAGCACCTTCTACCGCTCACTGCTGGAGGACGATGACATGGGGGACCTGGTGGATGCTGAGGAGTATCTGGTA
CCCCAGCAGGGCTTCTTCTGTCCAGACCCTGCCCCGGGCGCTGGGGGCATGGTCCACCACAGGCACCGCAGCTCA
TCTACCAGGAGTGGCGGTGGGGACCTGACACTAGGGCTGGAGCCCTCTGAAGAGGAGGCCCCAGGTCTCCACTG
GCACCCCTCCGAAGGGGCTGGCTCCGATGTATTTGATGGTGACCTGGGAATGGGGGCAGCCAAGGGGCTGCAAAGC
CTCCCCACACATGACCCAGCCCTCTACAGCGGTACAGTGAGGACCCACAGTACCCCTGCCCTCTGAGACTGAT
GGCTACGTTGCCCCCTGACCTGCAGCCCCCAGCCTGAATATGTGAACCAGCCAGATGTTCCGGCCCCAGCCCCCT

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FIGURE 945B

TCGCCCCGAGAGGGCCCTCTGCCTGCTGCCCCGACCTGCTGGTGCCACTCTGGAAAGGGCCAAGACTCTCTCCCCA
GGGAAGAATGGGGTTCGTCAAAGACGTTTTTGCCTTTGGGGGTGCCGTGGAGAACCCCGAGTACTTGACACCCAG
GGAGGAGCTGCCCCCTCAGCCCCACCTCCTCCTGCCTTCAGCCAGCCTTCGACAACCTCTATTACTGGGACCAG
GACCCACCAGAGCGGGGGCTCCACCCAGCACCTTCAAAGGGACACCTACGGCAGAGAACCCAGAGTACCTGGGT
CTGGACGTGCCAGTGTGAACCAGAAGGCCAAGTCCGCAGAAGCCCTGATGTGTCTCAGGGAGCAGGGAAGGCCT
GACTTCTGCTGGCATCAAGAGGTGGGAGGGCCCTCCGACCACTTCAGGGGAACCTGCCATGCCAGGAACCTGTC
CTAAGGAACCTTCCTTCCTGCTTGAGTTCCCAGATGGCTGGAAGGGGTCCAGCCTCGTTGGAAGAGGAACAGCAC
TGGGGAGTCTTTGTGGATTCTGAGGCCCTGCCCAATGAGACTCTAGGGTCCAGTGGATGCCACAGCCCAGCTTGG
CCCTTTCCTTCCAGATCCTGGGTACTGAAAGCCTTAGGGAAGCTGGCCTGAGAGGGGAAGCGGCCCTAAGGGAGT
GTCTAAGAACAAAAGCGACCCATTTCAGAGACTGTCCCTGAAACCTAGTACTGCCCCCATGAGGAAGGAACAGCA
ATGGTGTCTAGTATCCAGGCTTTGTACAGAGTGCTTTTCTGTTTAGTTTTTACTTTTTTGTGTTTTTTTAAA
GACGAAATAAAGACCCAGGGGAGAATGGGTGTTGTATGGGGAGGCAAGTGTGGGGGTCTTCTCCACACCCACT
TTGTCCATTTGCAAATATATTTTGGAAAAC

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FIGURE 946

MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMRLRHL YQGCQVVQGNLELTYP TNASLSFLQ
DIQEVQGYVLI AHNQVRQVPLQRLRIVRG TQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLRSLTEILK
GGVLIQRNPQLCYQDTILWKDIFHKNNQLALT LIDTNRSRACHPCSPMCKGSRGWGESSEDCQSLTRTV CAGGCA
RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
YNYLSTDVGSC TLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA
FLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL PDL SVFQNLQVIRGRILHNGAYSLTLQGLGI
SWLGLRSLRELGSG LALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGP
TQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQPONGSVTCFGPEADQCVACAHYKDPFFCVARC
PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGILI
KRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRI LKETELRKVKVLGSGAFGT VYKGIWIPDGENVKIPV
AIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRRGLGSQDLLNW
CMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEHADGGKVP IKWMALESILRRRFT
HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPP ICTIDVYMIMVKCWMIDSECRPRFREL VSE
FSRMARDPQRFVVIQNE DLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRS
STRSGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAGLQSLPTHDPSP LQRYSEDPTVPLPSETD
GYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKT LSPGKNGVVKDVFAFGGAVENPEYLTPQ
GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLG LDVPV

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FIGURE 948

MKDRLEQLKAKQLTQDDDTDAVEIAIDNTAFMDEFFSEIEETRLNIDKISEHVVEAKKLYSIILSAPIPEPKTKD
DLEQLTTEIKKRANNVRNKLKSMEKHIEEDEVRSSADLRIRKSQHSVLSRKFFVEVMKYNEAQVDFRERSKGRIQ
RQLEITGKKTTDEELEEMLESGNPAIFTSGIIDSQISKQALSEIEGRHKDIVRLESSIKELHDMFMDIAMLVENQ
GEMLDNIELNVMHTVDHVEKARDETKKAVKYQSQARKKLIIIIIVLVVVLLGILALIIGLSVGLN

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FIGURE 949

CGGCACGAGGCAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGAACCAGCGGTTACC**ATG**

GAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTATGACTCCATGAAGGAA
CCCTGTTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCCACCATCTACTCCATCATCTTCTTAACT
GGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAAACTGAGAAGCATGACGGACAAGTAC
AGGCTGCACCTGTCAAGTGGCCGACCTCCTCTTTGTATCATCAGCTTCCCTTCTGGGCAGTTGATGCCGTGGCAAAC
TGGTACTTTGGGAACTTCCTATGCAAGGCAGTCCATGTATCTACACAGTCAACCTCTACAGCAGTGTCTCATC
CTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAGGCCAAGGAAGCTGTTG
GCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGACTTCATCTTTGCCAAC
GTCAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGTGGTTGTGTTCCAGTTT
CAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTATCCTGTCTGCTATTGCATTATCATCTCCAAGCTG
TCACACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCTGGCTTTCTTCGCCTGT
TGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAATCATCAAGCAAGGGTGTGAGTTT
GAGAACACTGTGCACAAGTGGATTTCATCACCGAGGCCCTAGCTTTCTTCCACTGTTGTCTGAACCCCATCCTC
TATGCTTTCTTGGAGCCAAATTTAAAACCTCTGCCAGCACGCACTCACCTCTGTGAGCAGAGGGTCCAGCCTC
AAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTCATCTGTTTCCACTGAGTCTGAGTCTTCAAGTTTTCACTCC
AGCT**TAA**CACAGATGTAAGAGACTTTTTTTTTATACGATAAATAACTTTTTTTAAGTTACACATTTTTTCAGATATA
AAAGACTGACCAATATTGTACAGTTTTTATTGCTTGTTGGATTTTTGCTCTTGTTTCTTTAGTTTTTTCGTGAA
GGTTTAATTGACTTATTTATATAAATTTTTTTGTTTCATATTGATGTGTGTCTAGGCAGGACCTGTGGCCAAGT
TCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGTGTAGTGAATCACG
TAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGGAACGTTTTTCCTGTTCTT
AAGACGTGATTTTGCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATGCTGGTTTTTTCAGT
TTTCAGGAGTGGGTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAAGTTGTTAATAAAAGTACATGTTAAA
CTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 950

MEGISIYTS DNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSM TDK
YRLHLSVADLLEFVITL PFWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLD RYLAIVHATNSQRPRKL
LAEKVVYVGWVWIPALLLTIPDFIFANVSEADDRYICDRFY PNDLWVVVFQFQHIMVGLILPGIVILSCYCI IISK
LSHSGKHQKRKALKTTVILILAFFACWLPYYIGISIDSFILLEI IKQGEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKFKTSAQHALTSVSRGSSLKILSKGKRGHSSVSTESESSSFHSS

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FIGURE 951A

AAGATGGCTGCCACGGGGGCTCCGCGGCTCCTCGGCGCTGAAGGGTTAATTCAACAGTTCACCACCATTACC
GGTGCAAGTGAAAGTGTAGGAAAACATATGCTTGAAGCGTGCAACAATAATCTGGAAATGGCAGTCACTATGTTT
TTGGATGGTGGAGGAATCGCTGAAGAGCCCAGTACCAGTTCAGCAAGTGTCTCTACTGTGACACCACACACAGAA
GAAGAAGTTCGTGCCCCAATTCCTCAAAAGCAGGAAATACTGGTGAACCAGAACCATTATTTGGTGCTCCTAAA
AGACGACGGCCTGCACGTTCAATTTTTGATGGTTTTCCGGGATTTTCAGACTGAAACTATTCCGGCAAGAACAAGAA
TTAAGAAATGGAGGAGCTATCGATAAGAAATTAACCTACCCTGCAGATCTATTCCGGCCACCCATTGATTTGATG
CATAAAGGCAGCTTTGAAACAGCCAAAAGAGTGTGGCCAGATGCAAAATAAGTGGCTGATGATAAACATTCAAAAT
GTTCAAGACTTTGCATGTCAGTGCCTCAACCGCGATGTGTGGAGCAACGAAGCTGTGAAGAATATTATCCGGGAA
CATTTTCATTTTCTGGCAGGTTTTATCATGACAGTGAGGAAGGTGAGAGATACATACAGTTTTTATAAGTTAGGGGAT
TTCCCTATGTTTTCCATATTGGACCCACGGACAGGTGAGAAGCTAGTAGAATGGCACCAGTTAGATGTATCTTCT
TTCTTGGACCAAGTGACGGGATTTCTGGGTGAACATGGACAACCTGGATGGACTTTCTAGCAGTCCCCCAAAAAA
TGTGCCCCGTTGAGAGAGCCTTATAGATGCAAGTGAAGACAGCCAGCTAGAAGCTGCCATCAGAGCCTCCTTACAA
GAAACACATTTTTGATTCAACACAGACAAAACAGGATAGCCGCTCAGATGAAGAATCTGAATCTGAACTTTTTCT
GGCAGTGAGGAGTTTCATATCCGTTTGTGGCTCTGATGAAGAAGAAGAGGTAGAGAATCTTGCCAAGTCCAGAAAG
TCTCCCCACAAAGATTTGGGGCATAGAAAAGAGGAGAATAGAAGGCCGCTGACTGAGCCACCAGTCAGAACTGAT
CCTGGAACAGCCACAAACCACCAAGGATTGCCAGCTGTGGATTGAGAGATACTGGAGATGCCACCTGAAAAAGCA
GATGGAGTAGTGGAGGGGATAGATGTAAATGGACCAAAAGCACAGCTGATGTTGCGGTATCCAGATGGAAAAAGG
GAACAGATCACTCTTCAGAGCAAGCTAAACTGCTAGCTTTGGTGAAGCACGTGCAGTCTAAAGGATACCCAAAT
GAACGTTTTGAACCTCTCACCAACTTTCCCTCGAAGGAAATTATCTCATCTGGACTATGATATTACATTGCAAGAG
GCAGGCCTTTGTCTCAAGAGACTGTCTTTGTACAGGAAAGAAATTAACACCATGGCTTGACCTCTCTCAGCTTA
CCCCTTTTTCCCTTTTCCCTGTGAGATACATGTCACCTAAGTATGCATTTTGGCTCATAGGACCACAGAGCCAAAG
TTGGGCAAGCAAGTCACCTTCCTTCTCTTATTTCTTGATCTCTCTCTATAATCAGTCTCTTTCTCCCCCTTTGTTT
CTTTCTCTCTTCTGTTTTCTCGCTCCCCACTCCGTACCCTTCTGCCTCCCCCTCCCCCACACTTTTCTTTCTT
ACCTAATCTGGTGACCAAACTGAAGTGAAGGATAAGACCTCTCCTAGTACTAGCAGCAGGAATTGTGTGTTCCA
GTAAGTGGTCTCTTGACGGCACTTTTTTGGGATCAAATGTTAACGTTACTCCCCAGACTCTTCGGGCAAAGGAA
TGGCTAGATTGAGAGTAAGAACAACCTCCCTTTTTTGTAAAGTCCCCGTGTTTAGCAGGGAGAAGAAATCTCTA
ACATGGGTTTGGTTTTGTTGTGTTCTTCATGTGGAAATGTGCTTAACAAAATATCCAGGCTTTTGTGTACGTGG
AAAAAGCATCCCTTGTAATGATTGCTCATCTAATTTAAAAACCTTTTTTCAAAGGATTTTCATGTTCCAGCTATA
AGGACTATTTCCATGACGTGTTATTGGCAGAATGAGTGTTAAATATGGAGCATATAGCATGGGGTGACTTTTCATT
GTCCTAACCTGAGACAGTTTTTCCTTATTACTCTGTATTGATCCTGCTAGTCCAAGAATGGACATGAAGTGAACCT
ATCGTGGTGACTGGGATAGGAAGGTGCTTGCTATTTTTGCCAGCACAGCATATTAGTTCCTTTGGAGCCCTCCAT
TGTCTGAGTCTGCAGTGATCTGTAGGAAGGCAGCTGGTCAATAATCATGTAGTACAATGGCTTGGAAATTGTAACC
ACTATGGTTATTGATTGTCTGTGTTGTTTTCAGGCATACTTAGGTATGTCCCTGGGGAAAAAGAAAACCATTCAG
CTGAGAGTTGCTAACCATGTTCTTTTGGTTAGAAATAATGGTTCATTTTTTGGCCCTGGTTGGAATAGTCTCTAA
AAGGCTCTGGTGACTGAATTGAACATGAGTCCGATGCTGTTTTCTTTCAAAGGTATCAAACGGAAAGCCTCT
CTAAGGGGAAGACCTTTCAACTCCATTGAGAAGACAACATTTAGTAAGGAGGATGGCGGAGGTTACTAGTAATTT
TCAGATGTCTTGGGCTTTTTCTGCCAACAAAACCCAAAATCAAATTAGAGTTGGTGAAAGCTTTCTTCAGTGTTT
TTAGAAGAGGCCATCTTGAATCTGTAGAATACCATTTACACATCAACTTCACCCTATGCTCATTTTCGTATTTTGA
GCTTAAATGGAGTCTCTGAAGGGGGGGTAGTCGTGATTCTGGTGGCAAACTAGAACTTTTAACTTGTAATAATG
AAAAATATTAATGGACCTTTTTGTGAGTTGAGGATTTAGATTGATTCTTTTATCTGAGGAGCGTATGTTCTCTCA
GATGTTGCGTAGAGACCTTTAGGTTTTCTACTACTTTAAGATTGCTCTCTTGGCAATTAGGGGATTTGGGAAAAG
AAGAAAAAAGATGCCATGTGTTGCTAGTACACAGTTATAGGATATGGTTTCTAATGGTTGAATTTTGAGGAACT
CTCCCTAAAGAATGAGTTTTATATCTCCTCAAGGAAATCATGGAAAAATCTGTTTATTCTTCAGTGAGTCTTTTT
GAATTAATGTTCTTAAATTTTTTTCTAAGTCTGTGTAAGTGCTTATGTATAAGTATATAATTGTATAAATATTTA
TAAATATATTTATATAATTACGGTTTTCTTTCTACCTTGAGTCAAAGTTCTGTCTTTAGATTGGTGACTGAGTAA
TACTTACACTTTGGTGTTTTTTCTTAGGTTCTTGAGGCTTAACTAGCAGCTTCTGATTTATTGAGTGAAAG
ATGGTTTTTCATGTTAATTCCTCAGTTGCATCTCTGAACCTGGATAACATACTTGCCGTTTGAAAAATAGAGCTGT
ATACTGTCAAAGGTGCACTGGAGGGTAAAACATTTGTTGGTAGTAGACAAGCTCAGAAATCCAAAATTCAGGGA

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FIGURE 952

KMAAHGGSAAASSALKGLIQQFTTITGASESVGKHMLEACNNNLEMAVTMFLDGGGIAEEPSTSSASVSTVRPHT
EEVRAPIPQKQEILVEPEPLFGAPKRRRPARSIFDGFRDFQTETIRQEQELRNNGAIDKKLTTLADLFRPPIDLM
HKGSFETAKECGQMKNWLMINIQNVQDFACQCLNRDVWSNEAVKNIIREHFIFWQVYHDSEEGQRYIQFYKLGD
FPYVSILDPRTGQKLVEWHQLDVSSFLDQVTGFLGEHQDLGLSSSPKKCARSESLIDASEDSQLEAAIRASLQ
ETHFDSTQTKQDSRSDEESESELFSGSEEFISVCGSDEEEVENLAKSRKSPHKDLGHRKEENRRPLTEPPVRTD
PGTATNHQGLPAVDSEILEMPPEKADGVVEGIDVNGPKAQLMLRYPDGKREQITLPEQAKLLALVKHVQSKGYPN
ERFELLTNFPRRKLSHLDYDITLQEAGLCPQETVVFVQERN

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FIGURE 953

GGAGGGCCCCGGCGGCACAGCGGAGGCAGAGAGGAAGGCGGTTCTGAGAGCTTCAGAGAGCGATGGAAAGCAAAA
TGGGTGAATTGCCTTTAGACATCAACATCCAGGAACCTCGCTGGGACCAAAGTACTTTCTGGGCAGAGCCCCGGC
ACTTTTTCACTGTTACTGATCCTCGAAATCTGCTGCTGTCCGGGGCACAGCTGGAAGCTTCTCGGAACATCGTGC
AGAACTACAGGGCCGGCGTGGTGACCCAGGGATCACCGAGGACCAGCTGTGGAGGGCCAAGTATGTGTATGACT
CCGCCTTCCATCCGGACACAGGGGAGAAGGTGGTCCTGATTGGCCGCATGTCAGCCCAGGTGCCCATGAACATGA
CCATCACTGGCTGCATGCTCACATTCTACAGGAAGACCCCAACCGTGGTGTCTGGCAGTGGGTGAATCAGTCCT
TCAATGCCATTGTAACTACTCCAACCGCAGTGGTGACACTCCCATCACTGTGAGGCAGCTGGGGACAGCCTATG
TGAGTGCCACCACTGGAGCTGTGGCCACGGCCCTGGGACTCAAATCCCTCACCAAGCACCTGCCCCCTTGGTGC
GCAGATTGTGCCCTTTGCAGCAGTGGCAGCTGCCAACTGCATCAACATCCCCCTGATGAGGCAGAGAGAGCTGC
AGGTGGGCATCCCGGTGGCTGATGAGGCAGGTGAGAGGCTTGGCTACTCGGTGACTGCAGCCAAGCAGGGAATCT
TCCAGGTGGTGATTTCAAGAATCTGCATGGCGATTCTGCCATGGCCATCCCACCACTGATCATGGACACTCTGG
AGAAGAAAGACTTCCTGAAGCGCCGCCCTGGCTGGGGGCACCCCTGCAGGTGGGACTGGTGGGCTTCTGCCTGG
TATTTGCAACCCCCCTGTGCTGTGCCCTATTCCCCCAGAAGAGCTCCATACACATAAGCAACCTGGAACCAGAGC
TGAGAGCTCAGATCCATGAGCAAAACCCACGCTTGAAGTGGTCTACTACAACAAGGGGCTTTTGAGGAGGGTCAG
CCTCTGTCCCCTCCCTCACTTCCTTGGGCTGCTGCTTTAGTGGAGTCATGTCACCCCTACCACTTGGCTATCTGC
CTAGCACTGGGCAGGGGCTTGGTGGGCAGATGGCAATTGAGGGTAGCAACCTATTAGGGTGGGGGAGGGACCTC
CATAAGGCTTTTCTCCCTTCTCTGTTTTCAAAGATCAGAGCACATAACCCCTCCTGTGCTTGAGTGTCCATGCA
TATACATACATGATACACATGTGTATGTGTACATTGGGTCTTGAAAGCTAGAAGCAGGCATGCTAGCCTAGTATG
TTCTGACATCTGGCTTCCCTTCTCAGCCTCATGTCCACCTGCCTGCCAGCCAGGCTACAGGTGTGACTTCCTTCT
CTAAACTGTTACACCAGCCAAGTTATTTTTGATGGCACCTCATCCCTTCTAGAAATAGGAGGAGCCCCAGGATCT
CAGGACAGAGACTTATAGACACTAGTAGGACAAAGCGGGCTGAATCCTTCAGGTTTCTGATACCTAGCTCCCCAA
GCTGACTGGGCTGGCAGAGGAGAACATGTTGAGACAAGGGAGGCAGGGGACTTATGCATCCCTCAGTGCCATCCC
TTGTATCCTGGAATAGCTCCATTTCCCCTCCTCCTCTCTACCAGACAAAGGAGTGCTGTGCTGTACTGCCCT
CGCTGTCTCCCCCACCACCTACTTGACAGCGTGGGCATCTTCAGGCACAGCCTTGGGAGTTTCTGGTGTGCTCT
GACATCATGACCTCAAATCTAAATCCTCCAATCCCAACTCCCTTTCCCAAACAAAAAGCCACAGAGGCAGAGCAA
GCATTCCCCTTTAAGAGCTTCCACTGCACCCCTCCCAAGGGACACAGCGGTAGGAATGGTGCTTAAACTCCACA
GGTATCAGAGAGGGTGTAAGTAGGACATCCTCAAGGGCAGCTAGGCCCCGAATGTACAATGTTAAGACAGGGAAT
TTTGTGTTCCATTGACTTTTTTTTTTTTTTTTAAATGGAGTTTCACTATTTTGGCCAGGCTGGAGTGCGATGGTGC
GATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCTTGCCTCAGTCTCCCGAGTAGTGGAAT
TACAGGTGTGTGCTACCACATCTTGCTAGTTTTGTATTTTAGCAGAGATGGGGGTTTACCATGTTGGCCAGGC
TAGTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGCACTGGGATTACAAGCATGAGCCA
CTGTGCCAGCCTGTTCCACTGACATTTCTTAGACATTAGCAAAACCCCACTTAACCTCTTTTCTTTCTTGA
GGGTTGGTCTGTCCCCACCTCCACCTCCCAACCCCTGGAAGAGGAAGGGCCCGGCATCAGTGGCTAGTCCAA
ATAAAATATGGGCTTGGGGATGGAATGGGTGGTGAAGTTCACAGAGTGTAGTTAGATCCCAACTCCCATGACC
TCTGGCTTCAGTGGTGGGTGGGGCAGGGCAGATGAAAGGGCTTCAGTGGGAACCTCTGAGAGCATTTTCTGTTC
CCCCTATCAACCGCCCCCAGTGATAACATCTGTGAAGCCAGCCATTACTCAATAAACTGCAAACTGTCTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 954

MGELPLDINIQEPRWDQSTFLGRARHFFTVDPRNLLLSGAQLEASRNIVQNYRAGVVTPGITEDQLWRAKYVYD
SAFHPDTGEKVVLIGRMSAQVPMNMTITGCMLTFYRKTPTVVFWQWVNSFNAINYSNRSGDTPITVRQLGTAY
VSATTGAVATALGLKSLTKHLPPLVGRFVFPFAAVAAAANCINIPLMRQRELQVGIPVADEAGQRLGYSVTAAKQGI
FQVVISRICMAIPAMAIPPLIMDTLEKKDFLKRRPWLGAFLQVGLVGFCLVFATPLCCALFPQKSSIHISNLEPE
LRAQIHEQNPSVEVYYNKGL

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FIGURE 955

TGCAGGAGTTTCATGATCCTCCCAGTCGGTGCAGCAAACCTTCAGGGAAGCCATGCGCATTGGAGCAGAGGTTTACC
ACAACCTGAAGAATGTCATCAAGGAGAAATATGGGAAAGATGCCACCAATGTGGGGGATGAAGGCGGGTTTGCTC
CCAACATCCTGGAGAATAAAGAAGGCCTGGAGCTGCTGAAGACTGCTATTGGGAAAGCTGGCTACACTGATAAGG
TGGTCATCGGCATGGACGTAGCGGCCTCCGAGTTCTTCAGGTCTGGGAAGTATGACCTGGACTTCAAGTCTCCCG
ATGACCCCAGCAGGTACATCTCGCCTGACCAGCTGGCTGACCTGTACAAGTCCTTCATCAAGGACTACCCAGTGG
TGTCTATCGAAGATCCCTTTGACCAGGATGACTGGGGAGCTTGGCAGAAGTTCACAGCCAGTGCAGGAATCCAGG
TAGTGGGGGATGATCTCACAGTGACCAACCCAAAGAGGATCGCCAAGGCCGTGAACGAGAAGTCCTGCAACTGCC
TCCTGCTCAAAGTCAACCAGATTGGCTCCGTGACCGAGTCTCTTCAGGCGTGCAAGCTGGCCCAGGCCAATGGTT
GGGGCGTCATGGTGTCTCATCGTTCGGGGGAGACTGAAGATACCTTCATCGCTGACCTGGTTGTGGGGCTGTGCA
CTGGGCAGATCAAGACTGGTGCCCTTGCCGATCTGAGCGCTTGGCCAAGTACAACCAGCTCCTCAGAATTGAAG
AGGAGCTGGGCAGCAAGGCTAAGTTTGCCGGCAGGAACCTCAGAAACCCCTTGGCCAAGTAAGCTGTGGGCAGGC
AAGCCTTCGGTCACCTGTTGGCTACACAGACCCCTCCCTCGTGTGACCTCAGGCAGCTCGAGGCCCCGACCAA
CACTTGACAGGGGTCCCTGCTAGTTAGCGCCCCACCGCCGTGGAGTTTCGTACCGCTTCCTTAGAACTTCTACAGAA
GCCAAGCTCCCTGGAGCCCTGTTGGCAGCTCTAGCTTTTGCAGTCGTGTAATGGGCCCAAGTCATTGTTTTTCTC
GCCTCACTTTCCACCAAGTGTCTAGAGTCATGTGAGCCTCGTGTGTCATCTCCGGGGTGGCCACAGGCTAGATCCCC
GGTGGTTTTGTGCTCAAAATAAAAAGCCTCAGTGACCCATGAGACGGAGATCTCGCCGGCTTTACGTTACCTCG
GTGTCTGCAGCACCTCCGCTTCCTCTCCTAGGCGACGAGACCCAGTGGCTAGAAGTTCACCATGTCTATTCTCA
AGATCCATGCCAGGGAGATCTTTGACTCTCGCGGAATCCCAGTGTGAGGTTGATCTCTTCACCTCAAAATAAA
AAGCCTCAGTGACCTGCATTTGAGGGTTGAGCAGCATATACCTTCACACTAGGTTTTCAGAGCCTGGGAAGAGGA
ATATTAAGACATCTTAACAACAAACCACAACATTGCCTGCATGTCTAAAAGAAAATATGGGCCTGGTGTGGTGGC
TCACACCTGTAATCCCAACACTTTGGGAGCCCGAGXCAG

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FIGURE 956

CCAGGGCCTGACTAAACCTGGAGACTCGGGTGGCCGAGGGGCTTCATACCAGCTGAAGAGCGACAAGCCGCTGGC
AGCCGCGGATCTCACCGCCGCTCAGGGTTTTTAGAACTTCAGCCATAAAAATGGGCAGAATTTTCCTTGATCATA
TCGGTGGTACCCGTCTGTTTTCTTGTCAAACTGTGATACGATCCTGACCAACCGCTCAGAAGTCACTCCACTC
GTTTCACAGGCGCCACTGGCAGAGCATTCTTTTTAACAAGGTAGTTAACCTGCAGTACAGCGAAGTTCAAGATC
GGGTGATGCTCACTGGCCGCCACATGGTTCGAGATGTGAGCTGCAAAACTGCAATAGCAAACTGGGATGGATCT
ATGAGTTTGCCACTGAAGACAGCCAGCGATATAAGGAAGGCCGCTGATCCTGGAACGTGCTCTAGTTCGAGAGA
GTGAGGGCTTTGAGGAGCATGTACCATCTGATAACTCTTGAAGATACAGAGAGAAATCCATCTTTTCCCAGGTCT
CCTTCACTGAAAACAAAATCTACTTACATACACTGTCACCTTAGCATCAGAGTCGGATTAATGAACTGCGGAAC
AAGAGGTTGTGAGAATCTAAGATGGAACCTTTCTTTCTTTCTTTCTTTTTTTTTTAAATTTTGTATTTTCCATCCA
ACAGCAGTGTGTAGAGAGAATATTATGCAGATGCCGTTAATTTTTTACCCTATGTTTACATCTTGAGGCAGCAGA
GTCTGTCTGCAGCTATGTGGTGAGCTATGTAAGGAAAAAATCTGGGCTGTTAGAGTGAAAAAGTGTGTTTTATG
TCAATTGTGAAAGGAAAAATGTTAGGAGTATGGTTTTTAACTTGGGCTTCATTTTTAACTTTTTTTTTTAAACCC
AGTTATTTCACTTGATTTGCTAGCTTCAGAGAAGAGATCCGAATCTGTGCCAGCGCTAAAGGCTCAGTGTTAGC
ATGGCTTGTGCTGGCCGGTGTGCCATATTCTTGTGGAGATGAACCGTAGCACCAGAGCCCATTCTTCCTTGTC
GTCTTGGCCCAAAGATGTCACCATTCCTAGTTATTTGTCACCACATAATTGGTGTGATTGGAAACTTTTTCTGA
GATGGGACAGAAGTCTGGGTTGTCTTTTTCCATGTAACCTTAAGCATAGTAATATAAAATAAAGTAATAGTTGGAT
GCTTTTGGTCTGTGTTGCTTTTTAAAAACACCTTATAAAAGAGGAGAGTATTTGATAAGCAATTTTCATAGTAGT
AAAGTTTTTTTTTCATCTCTTAACTAAATTGACCATGCATATAATATTCTTTGTTTAAATGAAAGCATACTGTTG
AAACCCGCAGTGTTGCATTTAGAAAACAGTTGAACAGAATGTCAATGTGCATTTCATGCAAAAAACATTTAATCT
GCATCTGTTTTAGAAAAGGGGAAATGAAGCAACTTGTCTAAAAATACTGCTTTACAAGCATTTCAGCCTTTCC
CCCTCAGTTTTGCATTGATTTTTTGACAAGTCTGTAGAGCCTAATAGTTTCCATCAAAGGCCTAGATCTCTTATT
TAGCATTTTTTTCAGCTCTTCTCTCAGAAGTTCAGCTGTTGAAACGAAAACGTACTTTGTACCCTCACATACAA
AGGGATCAAATTTGACCTGGTGTTATTTTAGCCCCAAATTTATGACATTACACAATATTAATAATGTAATGTTTC
TTTACCCAACTACTTCTAGATATTCTAGTATTTGCTTCTGGTGGAATTAAATGACGGTAAATTTGGCTAATTAT
TTGAATGAATGAATGGATGGATGTTTTGCATGCTCAATTTCTAGGTCCTTTGTCTAGAAAGGAAATTTGCCTCAG
TTGAATTAGTGAAATATTTCTGTCGTTGATATTAAGTGACTTCTGAGTACAGTTAAGTTCCTCCTATTTGCCA
CTGGGCTGTTGGTTAGAAGCATAGGTAAGTGAATTAAGTAGGTATGATACTGCATTTGAAATAAGTGACACAAAC
TATCCTTTCTCCACCATGGACTCAATCTGAGAACAACAGCATTTCATTTCCATTTCATTTCCATACTGGCTTTTGAT
TATATGCAGATTCTAGTAGCATGCCTTACCTACAGCACTATGTGCATTTGCTGTCAATAAAGTATATTTTGT
CTTGCAA

1062/1629
FIGURE 957

MGRIFLDHIGGTRLFSCANDTILTNRSELISTRFTGATGRAFLFNKVVNLYSEVQDRVMLTGRHMVRDVCKN
CNSKLGWIYEFATEDSQRYKEGRVILERALVRESEGFEHVPSDNS

1064/1629
FIGURE 959

MAAGSGVGKKRSSKSDADSGFLGLRPTSDPALRRRRRGPRNKKRGWRRRLAQEPLGLEVDQFLEDVRLQERTSG
GLLSEAPNEKLFFVDTGSKEKGLTKKRTKVQKKSLLLKKPLRVDLILENTSKVPAPKDVLAHQVPNAKKLRKEQ
LWEKLAKQGELPREVRRARLLNPSATRAKPGPQDTVERPFYDLWASDNPLDRPLVGQDEFFLEQTKKKGVKRP
ARLHTKPSQAPAVEVAPAGASYNPSFEDHQTLSSAAHEVELQRQKEAEKLERQLALPATEQAATQESTFQELCEG
LLEESDGE GEPGQEGPEAGDAEVCPTPARLATTEKKTEQQRREKAVHRLRVQQAALRAARLRHQELFRLRGIK
AQVALRLAELARRRRRRQARREAEADKPRRLGRLKYQAPDIDVQLSSELTDSLRTLKPEGNILRDRFKSFQRRNM
IEPRERAKFKRKYKVKLVEKRAFREIQL

1065/1629
FIGURE 960

GGGCTCTCTCCTTGTCAGTCGGCGCCGCGTGC GGGCTGGTGGCTCTGTGGCAGCGGCGGGCGGCAGGACTCCGGCA
CTATGAGCGGCTTCAGCACCGAGGAGCGCGCCGCGCCCTTCTCCCTGGAGTACCGAGTCTTCTCAAAAAATGAGA
AAGGACAATATATATCTCCATTTTCATGATATTCCAATTTATGCAGATAAGGATGTGTTTTACATGGTAGTTGAAG
TACCACGCTGGTCTAATGCAAAAAATGGAGATTGCTACAAAGGACCCTTTAAACCCTATTAAACAAGATGTGAAAA
AAGGAAAACCTTCGCTATGTTGCGAATTTGTTCCCGTATAAAGGATATATCTGGAACCTATGGTGCCATCCCTCAGA
CTTGGAAGACCCAGGGCACAAATGATAAACATACTGGCTGTTGTGGTGACAATGACCCAATTGATGTGTGTGAAA
TTGGAAGCAAGGTATGTGCAAGAGGTGAAATAATTGGCGTGAAAGTTCTAGGCATATTGGCTATGATTGACGAAG
GGGAAACCGACTGGAAAGTCATTGCCATTAATGTGGATGATCCTGATGCAGCCAATTATAATGATATCAATGATG
TCAAACGGCTGAAACCTGGCTACTTAGAAGCTACTGTGGACTGGTTTAGAAGGTATAAGGTTCCCTGATGGAAAAC
CAGAAAATGAGTTTGCGTTTAATGCAGAATTTAAAGATAAGGACTTTGCCATTGATATTATTTAAAGCACTCATG
ACCATTGGAAAGCATTAGTGACTAAGAAAACGAATGGAAAAGGAATCAGTTGCATGAATACAACCTTTGTCTGAGA
GCCCCTTCAAGTGTGATCCTGATGCTGCCAGAGCCATTGTGGATGCTTTACCACCACCCTGTGAATCTGCCTGCA
CAGTACCAACAGACGTGGATAAGTGGTTCCATCACCAGAAAACTTAATGAGATTTCTCTGGAATACAAGCTGATA
TTGCTACATCGTGTTTCATCTGGATGTATTAGAAGTAAAAGTAGTAGCTTTTCAAAGCTTTAAATTTGTAGAACTC
ATCTAACTAAAGTAAATTCTGCTGTGACTAATCCAATATACTCAGAATGTTATCCATCTAAAGCATTTTTCATAT
CTCAACTAAGATAACTTTTAGCACATGCTTAAATATCAAAGCAGTTGTCATTTGGAAGTCACTTGTGAATAGATG
TGCAAGGGGAGCACATATTGGATGTATATGTTACCATATGTTAGGAAATAAAATTATTTTGCTGAAAAAAAAAAAA
AAAAAA

1066/1629
FIGURE 961

MSGFSTEERAAPFSLEYRVFLKNEKGQYISPFHDIPIYADKDVFMVVEVPRWSNAKMEIATKDPLNPIKQDVKK
GKLRYVANLFPYKGYIWNYGAIPQTWEDPGHNDKHTGCCGDNDPIDVCEIGSKVCARGEIIGVKVLGILAMIDEG
ETDWKVIAINVDDPDAANYNDINDVKRLKPGYLEATVDWFRRYKVPDGKPENEFNAEFKDKDFAIDIIKSTHD
HWKALVTKKTNGKGISCMNTTLESSEPFKCDPDAARAIVDALPPCESACTVPTDVKWFHHQKN

1067/1629
FIGURE 962

AGACGGGCTGCAAGAGGGAGCCGGCCCCGACGCGGACCGCTTCCCTGCAGTGCCCCGAGTCCCGGGCCCCGCGCCGC
CGCCGCCCCGGCTCCGCTCGCGGCCCCCTCTGTCTGCAGGCGTGCCCCGGCGGGCGGCGGAGAGCCGTCCCTCGGCCGA
GGAGGCTGGGAAACGCGAGCGCAGGCGGCAGAGAGGCCTCAACGCCGTCCCTTTTCGCCACCGCCTTTTTCCTTGCC
TCGCGCCGCTGTGCATTTCTCTCCTTTTTCCTTTGTTTTTTTGGCCCCCTCGCGGGGTGTGGGCATTGTTGGTTAGCA
AAAGTGCAGCCTCAAGATGGCTGATGGCAACGAGGATCTGCGGGCTGACGACTTGCCCTGGGCCAGCCTTCGAGAG
CTATGAGTCCATGGAGCTTGCCCTGCCCCGCTGAGCGCAGCGGCCACGTAGCCGTCAGCGACGGGCGCCACATGTT
CGTCTGGGGCGGCTACAAGAGTAATCAAGTCAGAGGATTATATGACTTTTATCTGCCTAGAGAAGAACTATGGAT
CTACAACATGGAGACTGGAAGATGGAAAAAATCAACACTGAAGGTGATGTTCCCTCCTTCTATGTCAGGAAGCTG
TGCTGTGTGTGTAGACAGGGTGCTGTACTTGTGTTGGAGGACACCATTCAAGAGGCAATACCAATAAGTTCTACAT
GCTGGATTCAAGGTCTACAGACAGAGTGTTACAGTGGGAAAGAATTGATTGCCAAGGAATTCCTCCATCATCAAA
GGACAAACTTGGTGTCTGGGTATATAAAAAACAAGTTAATATTTTTTGGAGGGTATGGATATTTGCCTGAAGATAA
AGTATTGGGAACTTTTGAATTCGATGAAACATCTTTTTTGAATTCAAGTCATCCAAGAGGATGGAATGATCATGT
ACATATTTTAGATACTGAAACATTTACCTGGAGCCAGCCTATAACTACTGGTAAAGCACCTTCACCTCGTGCTGC
CCATGCCTGTGCAACTGTGCGAAATAGAGGCTTCGTGTTTGGAGGCAGGTATCGAGATGCTAGAATGAATGATCT
TCACTATCTTAATCTGGATACATGGGAGTGGAATGAATTAATTCACAAGGCATATGCCCAGTTGGTCGATCTTG
GCACTCACTAACACCAGTTTCTTCAGATCATCTTTTTCTCTTTGGAGGATTTACCACTGATAAACAGCCACTAAG
TGATGCCTGGACTTACTGCATCAGTAAAAATGAATGGATACAATTTAATCATCCATATACCGAAAAACCAAGGTT
ATGGCACACAGCTTGTGCCAGCGATGAAGGAGAAGTAATTGTTTTTGGTGGATGTGCCAACAACCTTGCTTGTCCA
TCACAGAGCTGCACACAGTAATGAAATACTAATATTTTCAAGTTCAACCAAAATCTCTTGACGGCTAAGCTTAGA
AGCAGTCATTTGCTTTAAAGAAATGTTAGCCAACCTCATGGAAGTGCCTTCCAAAACACTTACTTCACAGTGTTAA
TCAGAGGTTTGGTAGTAACAACACTTCTGGATCTTAAAGGCTTCATAAATAATGCCTATGATCACCTTGATGGAC
AGCAATCCTGTAAACATCACAGAGTGGCATCATTTGTATAATTATATGCATTGTTGTAGTTTGACCTGTTGGTT
TTAATGTGCATGTGAATGGCCTAGAGAACCTATTTTTGTGTCTAAAGTTTACAATAAATGTATTTAACACC

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FIGURE 963

MADGNEDLRADDLPGPAFESYESMELACPAERSGHVAVSDGRHMFVWGGYKSNQVRGLYDFYLPREELWIYNMET
GRWKKINTEGDVPPSMSGSCAVCVDRVLYLFGGHHSRGNTNKFYMLDSRSTDRVLQWERIDCQGIPPSSKDKLGV
WVYKNKLIFFGGYGYLPEDKVLGTFEFDETSFWNSSHPRGWNDHVVHILDTETFTWSQPITTGKAPSPRAAHACAT
VGNRGFVFGGRYRDARMNDLHYLNLDTWEWNELIPQGICPVGRSWHSLTPVSSDHLFLFEGGFTTDKQPLSDAWTY
CISKNEWIQFNHPYTEKPRLWHTACASDEGEVIVFGGCANNLLVHHRAAHSNEILIFSVQPKSLVRLSLEAVICF
KEMLANSWNCCLPKHLLHSVNQRFGSNNTSGS

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FIGURE 964

CGGCGACTGACCGTGGTCGTGGGCGGACGGCGGCTTGCAGCGTGGAGGAGCTGGGGTCGCTGTGGGTGCGGAAGC
AGAGCCCCGGGACGTGCGCGCTTGGTGACGATCCTGAAGGGGAGCTCCGAGGGGGCCGGGTGCGCAGGGCTGCTG
CGGCCATTCCCGGAGCCCGGCGCGGGGCCCCGCGAGATACTGGTTTAGGCCGTCCAGGGCTCCGGGCGCACCCGG
TGGCCGCTGCTGCAGCGGAGGGAGCGCGGGCGGCGGGGGCTCGGAGACAGCGTTTCTCCCGGAAGTCTTCTCTCG
GGCAGCAGGTGGGAAGTGGGAGCCGGAGCGGCAGCTGGCAGCGTTCTCTCCGAGGTGCGCACCAATGCGCCCTGC
AGCCCTGCGCGGGGCCCTGCTGGGCTGCCTCTGCCTGGCGTTGCTTTGCCTGGGCGGTGCGGACAAGCGCCTGCG
TGACAACCATGAGTGGAAAACTAATTATGGTTCAGCACTGGCCTGAGACAGTATGCGAGAAAATTCAAACGA
CTGTAGAGACCCTCCGGATTACTGGACAATACATGGACTATGGCCCGATAAAAGTGAAGGATGTAATAGATCGTG
GCCCTTCAATTTAGAAGAGATTAAGGATCTTTTGCCAGAAATGAGGGCATACTGGCCTGACGTAATTCACCTCGTT
TCCCAATCGCAGCCGCTTCTGGAAGCATGAGTGGGAAAAGCATGGGACCTGCGCCGCCAGGTGGATGCGCTCAA
CTCCCAGAAGAAGTACTTTGGCAGAAGCCTGGAACCTACAGGGAGCTGGACCTCAACAGTGTGCTTCTAAAATT
GGGGATAAAACCATCCATCAATTACTACCAAGTTGCAGATTTTAAAGATGCCCTTGCCAGAGTATATGGAGTGAT
ACCCAAAATCCAGTGCCTTCCACCAAGCCAGGATGAGGAAGTACAGACAATTGGTCAGATAGAACTGTGCCTCAC
TAAGCAAGACCAGCAGCTGCAAACTGCACCGAGCCGGGGGAGCAGCCGTCCCCAAGCAGGAAGTCTGGCTGGC
AAATGGGGCCGCCGAGAGCCGGGGTCTGAGAGTCTGTGAAGATGGCCCAGTCTTCTATCCCCACCTAAAAAGAC
CAAGCATTGATGCCCAAGTTTTTGAAATATTCTGTTTTAAAAAGCAAGAGAAATTCACAACTGCAG

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FIGURE 965

MRPAALRGALLGCLCLALLCLGGADKRLRDNHEWKKLIMVQHWPETVCEKIQNDCRDPPDYWTIHGLWPKSEGC
NRSWPFNLEEIKDLLPEMRAYWPDVIHSFPNRSRFBKHEWEKHGTCAAQVDALNSQKKYFGRSLELYRELDLSV
LLKLGKPSINYYQVADFKDALARVYGVIPKIQCLPPSQDEEVQTIGQIELCLTKQDQQLQNCTEPGEQSPKQE
VWLANGAAESRGLRVCEGPFVYPPPKTKH

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FIGURE 966

CGGCGACTGACCGTGGTTCGTGGGCGGACGGCGGCTTGCAGCGTGGAGGAGCTGGGGTCGCTGTGGGTTCGCGAAGC
AGAGCCCGGGACGTGCGCGCTTGGTGCACGATCCTGAAGGGGAGCTCCGAGGGGCCCCGGGTGCGCAGGGCTGCTG
CGGCCATTCCCGGAGCCCCGGCGCGGGGGCCCCGCGAGATACTGGTTTAGGCCGTCCCAGGGCTCCGGGCGCACCCGG
TGGCCGCTGCTGCAGCGGAGGGAGCGCGGGCGGCGGGGGCTCGGAGACAGCGTTTCTCCCGGAAGTCTTCTCTCG
GGCAGCAGGTGGGAAGTGGGAGCCGGAGCGGCAGCTGGCAGCGTTCTCTCCGAGGTGGGCACCATGCGCCCTGC
AGCCCTGCGCGGGGGCCCTGCTGGGCTGCCTCTGCCTGGCGTTGCTTTGCCTGGGCGGTGCGGACAAGCGCCTGCG
TGACAACCATGAGTGGAAAACTAATTATGGTTTCAGCACTGGCCTGAGACAGTATGCGAGAAAATTCAAACGA
CTGTAGAGACCCCTCCGGATTACTGGACAATACATGGACTATGGCCCGATAAAAGTGAAGGATGTAATAGATCGTG
GCCCTTCAATTTAGAAGAGATTAAGGATCTTTTGCCAGAAATGAGGGCATACTGGCCTGACGTAATCACTCGTT
TCCCAATCGCAGCCGCTTCTGGAAGCATGAGTGGGAAAAGCATGGGACCTGCGCCGCCAGGTGGATGCGCTCAA
CTCCAGAGAAGAAGTACTTTGGCAGAAGCCTGGAACCTCTACAGGGAGCTGGACCTCAACAGTGTGCTTCTAAAATT
GGGGATAAAACCATCCATCAATTACTACCAAGTTGCAGATTTTAAAGATGCCCTTGCCAGAGTATATGGAGTGAT
ACCCAAAATCCAGTGCCTTCCACCAAGCCAGGATGAGGAAGTACAGACAATTGGTCAGATAGAAGTGTGCCTCAC
TAAGCAAGACCAGCAGCTGCAAACTGCACCGAGCCGGGGGAGCAGCCGTCCCCCAAGCAGGAAGTCTGGCTGGC
AAATGGGGCCCGGAGAGCCGGGGTCTGAGAGTCTGTGAAGATGGCCAGTCTTCTATCCCCACCTAAAAAGAC
CAAGCATTGATGCCCAAGTTTGGAAATATTCTGTTTTAAAAGCAAGAGAAATTCACAACTGCAG

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FIGURE 967

MRPAALRGALLGCLCLALLCLGGADKRLRDNHEWKKLIMVQHWPETVCEKIQNDCRDPPDYWTIHGLWPKSEGC
NRSWPFNLEEIKDLLPEMRAYWPDVIHSFPNRSRFWKHEWEKHGTCAAQVDALNSQKKYFGRSLELYRELDLNSV
LLKLGIKPSINYYQVADFKDALARVYGVIPKIQCLPPSQDEEVQTIGQIELCLTKQDQQLQNCTEPGEQPSPKQE
VWLANGAAESRGLRVCEDGPVFYPPPKKTKH

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FIGURE 968

GAATTCCGAGCTTTTTATTCTAAGAGGAGAAAAATCAGTAACGGGAGAAGCAGGAGGATGTCCAGAAGAAATTC
ATCCCTTGCTCTCGCCCCCTACTCTTTCTGGTGTTAGATCGAGCTACCCCTCTAAAAGCAGTTTAGAGTGGTAAAAA
AAAAAAAAACACACCAAACGCTCGCAGCCACAAAAGGGATGAAATTTCTTCTGGACATCCTCCTGCTTCTCCCGT
TACTGATCGTCTGCTCCCTAGAGTCCTTCGTGAAGCTTTTTATTCTAAGAGGAGAAAAATCAGTCACCGGCGGAAA
TCGTGCTGATTACAGGAGCTGGGCATGGAATTGGGAGACTGACTGCCTATGAATTTGCTAAACTTAAAAGCAAGC
TGGTTCTCTGGGATATAAATAAGCATGGACTGGAGGAAACAGCTGCCAAATGCAAGGGACTGGGTGCCAAGGTTC
ATACCTTTGTGGTAGACTGCAGCAACCGAGAAGATATTTACAGCTCTGCAAAGAAGGTGAAGGCAGAAATTGGAG
ATGTTAGTATTTTAGTAAATAATGCTGGTGTAGTCTATACATCAGATTTGTTTGCTACACAAGATCCTCAGATTG
AAAAGACTTTTGAAGTTAATGTACTTGACATTTCTGGACTACAAAGGCATTTCTTCTGCAATGACGAAGAATA
ACCATGGCCATATTGTCACGTGGCTTCGGCAGCTGGACATGTCTCGGTCCCCTTCTTACTGGCTTACTGTTCAA
GCAAGTTTGCTGCTGTTGGATTTTATAAACTTTGACAGATGAACTGGCTGCCTTACAAATAACTGGAGTCAAAA
CAACATGCTCTGTCTCTAATTTTCGTAAACACTGGCTTCATCAAAAATCCAAGTACAAGTTTGGGACCCACTCTGG
AACCCGAGGAAGTGGTAAACAGGCTGATGCATGGGATTCTGACTGAGCAGAAGATGATTTTTATTCCATCTTCTA
TAGCTTTTTTAACAACATTGGAAGGATCCTTCCTGAGCGTTTCCTGGCAGTTTTAAAACGAAAAATCAGTGTTA
AGTTTGATGCAGTTATTGGATATAAAATGAAAGCGCAATTAAGCACCTAGTTTTCTGAAAAGTGAATTAACAGGTT
TAGGTTGATGTCATCTAATAGTGCCAGAATTTAATGTTTGAAGTCTGTTTTTTCTAATTATCCCCATTTCTTC
AATATCATTTTTGAGGCTTTGGCAGTCTTCATTTACTACCACTTGTTCTTTAGCCAAAAGCTGATTACATATGAT
ATAAACAGAGAAATACCTTTAGAGGTGACTTTAAGGAAAATGAAGAAAAAGAACCAAAATGACTTTATTAATAA
ATTTCCAAGATTATTTGTGGCTCACCTGAAGGCTTTGCAAAATTTGTACCATAACCGTTTATTTAACATATATTT
TTATTTTTGATTGCACTTAAATTTTGTATAATTTGTGTTTCTTTTTCTGTTCTACATAAAATCAGAACTTCAAG
CTCTCTAAATAAAATGAAGGACTATATCTAGTGGTATTTTACAATGAATATCATGAAGTCTCAATGGGTAGGTTT
CATCTACCCATTGCCACTCTGTTTCCTGAGAGATACCTCACATTCCAATGCCAAACATTTCTGCACAGGGAAGC
TAGAGGTGGATACACGTGTTGCAAGTATAAAGCATCACTGGGGGATTTAAGGAGAATTGAGAGAATGTACCCAC
AAATGGCAGCAATAATAAATGGATCACACTTAACG

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FIGURE 969

MKFLLDI L L L L L P L L I V C S L E S F V K L F I P K R R K S V T G E I V L I T G A G H G I G R L T A Y E F A K L K S K L V L W D I N K H G L E E
T A A K C K G L G A K V H T F V V D C S N R E D I Y S S A K K V K A E I G D V S I L V N N A G V V Y T S D L F A T Q D P Q I E K T F E V N V L A H F W
T T K A F L P A M T K N N H G H I V T V A S A A G H V S V P F L L A Y C S S K F A A V G F H K T L T D E L A A L Q I T G V K T T C L C P N F V N T G F
I K N P S T S L G P T L E P E E V V N R L M H G I L T E Q K M I F I P S S I A F L T T L E R I L P E R F L A V L K R K I S V K F D A V I G Y K M K A Q

[illegible]

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FIGURE 971

MLESSGCKALKEGVLEKRS DGLLQLWKKKCCILTEEGLLLIPP KQLQHQQQQQQQQQQQQQQQPGQGP AEPSQPSG
PAVASLEPPVKLKE LHF SNMKTVD CVERKGKMYFTV VMAEGKEIDFRCPQDQG WNAEITLQMVQYKNRQAILAV
KSTRQKQQHLVQQQPPSQPQPQLQPQPQPQPQPQPQPQSQPQPQPQPKPQQLHPYPHPHPHPHSHPHSHPH
PHPHPHPHQIPHPHPQPHSQPHGHRLLRSTNSA

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FIGURE 972

CCCGTATCCGCATCCACATCCACATCCACACTCTCATCCTCACTCGCACCCACACCCTCACCCGCACCCGCATCC
GCACCAAAATACCGCACCCACACCCACAGCCGCACTCGCAGCCGCACGGGCACCGGCTTCTCCGCAGCACCTCCAA
CTCTGCCTGAAAGGGGCAGCTCCCGGGCAAGACAAGGTTTTGAGGACTTGAGGAAGTGGGACGAGCACATTTCTA
TTGTCTTCACTTGGATCAAAAGCAAAACAGTCTCTCCGCCCCGCACCAGATCAAGTAGTTTGGACATCACCTTAC
TGAACAACTTGGCGATTCTTCTTAGTTTTCTGCATACTTTTCATCACCGATGCAGGAAACGATTTTCGAGTCAAGA
AGACTTTTATTTATGAACCTTTGAAAGGATCGTCTTGATGGTGAATTTTCTAGGAGCGATGATGTACTGTAATT
TTATTTTAATGTATTTTGATTTATGATTATTTATTAGTTTTTTTTTAAATGCTTGTTCTAAGACATTTCTGAATGT
AGACCATTTTCCAAAAAGGAACTTTATTTTCAAAAACCTAATCCGTAGTAATTCCTAATCTGGAGAATAAAAA
AGGGCGGTGGAGGGGAAAACATTAAAGAATTTATTCATTATTTCTCGAGTACTTTCAGAAAGTCTGACACTTTTCAT
TGTTGTGCCAGCTGGTTGAAATTA AAACTCTGATATTACTTTTTTTGAGGATTTTTATTTTTGTTTTTGCTTAAA
CACTATAGTTTGTCTAGAAGTTTAAAAAGCTAAAAGTTAAAAATGGTGTAAATTATGAAAATCTAACACTCAAGAT
AGTTTCTAAAAGGAAATCAGTAGTTAAGGATACCTGATTTCAAAAATATTTAAAGCATAACCTAAGTATGGTAGG
ATGATTGTATCTTGAATATGTGGTAGGGCCACATCTATTGTAGGAAAACTTGCTTTTATCATCTGTGTGTAAAG
GGCTTAATAAGGAGAAGAGGCCTTTTGACTGATTTGTGAGTATAAATGCATTTGCTGTTTCATTTCAAAAATGTT
GTGGAGGAAAAGAGTACATTTAACTTGATAAGAGAATATTTGTACTCCTGTCCAGGCTGCAGGACCTTTCTTCG
AGAGCTTTGCACACTTGACTTGAACCACATTTTCTGATCCCTTTACTTTGTTTTAGAAGCACACTGAAAAATCTC
GTTGTTTTAAAGTACAATTTGTAAATATTTCAAAGGTCTAGGAGTCATAACTTTTGTTTTCATACTGAAAATGATG
TTGATCAGAGAAACCAACTGTTTTGCTTTTCAATTGCTCTGTGAGAAATTGAGGATTCTGTTTTGCTGTTAGGTAA
GCTAACTCAGAAATTGAAAGGAAAGACTGGATAAACACCGGATTTTCAGTAAGAAAAACAACCCAGTCTTGTCTT
AGAAGCCACTTGTGTGAGGAGTCTGTTGGGGGAAAAAAGAGGATATGCTTTTAAAGGTAGAACAACCTTCTTCTG
TGTTAAATCAAAAAGGATGTTCAAAATCCACCAGGACAGATGCTACTTGGGTTTAAATGGAGCCATAGATGATACA
AAGTCTCTTGGGGCTGAAAATCACTTCTATTTGCGATGGCTTTACTAAGTGGTTTCTGTTTTCCATTATCTTTT
TCACAGAAAGTCTTGGTCAGTATTTTTCCAGCATTTAAATTGAAACGGTCAGTATTAGACCACTGCTAGGTTATG
TAGTCAAGAAATAAAAAATAGAATTACATGCTACAGATGTCTTTATTCTCCTTCCATCTAGAAAGGAGTTCCAAGG
TCAAATTACTTTTTTAGTGCAATAGTTAAATGACATTTTGAGATCATAACTCATATCCAAAAAGTTGCAGGGAAAA
TTAAATAGCTTTCCCTATTAAGCTAATGGCAAACAAAACCTTAAGTGGACCCCACTTCCAGTGGTTGTTTAGG
TTGCAGTTGTGAAAATATGCTGCCAACATTTAAAACTTGTTTCATATGTATATATGTATACACATATATGAATA
TGATATATATATACATATATGAGAACATGTGTGTACACATATATGAATATGTATATATGTGTATGTATGTATAT
ATGTATATGAAATGAGAGCCACATCTAAAGATTTCTTAAATCAAGTTTGGTTCAGCTTCCCTTAGAACTGTGGCTG
TACTTTTTGAGGAGTACCTCATAGTACTATATTTTTAATGCATGCAAATCATAATAGCTCCAAATGAACCACAGT
TTTTTCCCAATGGAGGATTTTTTTTTTAATCTTGTACTAAAAAATAATCCATACCAAAATATTTTTACAAATT
AAGATTGATGTAGGTTTTAAAAAAGGCATTTGTATGTTGTAGCTTACATATGGGGCTAGGTAATTTTATTGCTT
AAAAAGATGCGCCTAGGCTCCCTCTTGGTGGCTGGATTTCTTTTCTTCGCCCCGTGGTGGCCATGGTTTTTAATA
GGGCCACCGGAATCATGGTTCTTTTTTTTTTTTTTTTTTGGAGATGGAGTCTCGCCCTGTGACCCAGGCTGGAG
TGCAGTGGCACGATCTCGGCTCACTGCAACCTCTGCCTCTTGGGTTTACGCCATTCTCCTGTGTGACCTCCTGA
GTAGCTGGGACTACAGGTGAATGCCACCACGCCCCGGCTGATTTTTGTATTTTTTAGTAGAGATGGGGTTTACCAT
AGTGGTCAGGCTGTTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGTGCTAGGATTACA
GGTGTGAGCCACCACACCCGGCCCCAGAGTAATGGTTTCTTGACTTTCTGTAGCCCTTGTTCCCTAGTCTGCTGT
GATATTTATGTTGACCTTTATCATTTTCTATTCTGAACCCCTCTTAGCATTTAATGTGAAATCTAAGAAATTAGA
AGTAGAATGGCTTTTATTGTTTTGACACCTTTGAAATTATTATTAATAATTTTTCCAGAGCAAAAAAGCAAACAC
GCTCAATAAGACTAAACAAAAACAAAATATAAATGTACATCATTTAATGTCCAGTGGCTCTATTCTACCTGTAAG
AAAATGATACAAAACCACTAAGATATTTTGAAGCCTGACAAATCAGCTTCATGGAAAAAGGTAAAAAATGCATT
TTTCAACCGAAAGGGCAGATCCAATAGAAGACCCGCTCCTTAAATAAACATAAAATGTAAAAAGTTGGAAAAAA
AA

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FIGURE 973

GTTTGC GGGTGGTTGTTGCTCTCGGGGCCGTGTGGAGTAGGTCTGGACCTGGACTCACGGCTGCTTGGAGCGTCC
GCCATGAGGAGAAGTGAGGTGCTGGCGGAGGAGTCCATAGTATGTCTGCAGAAAGCCCTAAATCACCTTCGGGAA
ATATGGGAGCTAATTGGGATTCCAGAGGACCAGCGTTACAAAGAACTGAGGTGGTAAAGAAGCATATCAAGGAA
CTCCTGGATATGATGATTGCTGAAGAGGAAAGCCTGAAGGAAAGACTCATCAAAGCATATCCGTCTGTCAGAAA
GAGCTGAACACTCTGTGCAGCGAGTTACATGTTGAGCCATTTTCAGGAAGAAGGAGAGACGACCATCTTGAACATA
GAAAAAGATTTGCGCACCCAAGTGAATTGATGCGAAAACAGAAAAAGGAGAGAAAAACAGGAAGTGAAGCTACTT
CAAGAGCAAGATCAAGAAGTGTGCGAAATTCTTTGTATGCCCCACTATGATATTGACAGTGCCTCAGTGCACAGC
TTAGAAGAGCTGAACAGTTTCAGGCAACATGTGACAACCTTTGAGGGAAACAAAGGCTTCTAGGCGTGAGGAGTTT
GTCAGTATAAAGAGACAGATCATACTGTGTATGGAAGAATTAGACCACACCCAGACACAAGCTTTGAAAGAGAT
GTGGTGTGTGAAGACGAAGATGCCTTTTGTGTTGCTTTGGAGAATATTGCAACACTACAAAAGTTGCTACGGCAG
CTGGAAATGCAGAAATCACAAAATGAAGCAGTGTGTGAGGGGCTGCGTACTCAAATCCGAGAGCTCTGGGACAGG
TTGCAAATACCTGAAGAAGAAAGAGAAGCTGTGGCCACCATTATGTCTGGGTCAAAGGCCAAGGTCCGGAAAAGCG
CTGCAATTAGAAGTGGATCGGTTGGAAGAACTGAAAATGCAAAACATGAAGAAAGTGATTGAGGCAATTCGAGTG
GAGCTGGTTTCAGTACTGGGACCAGTGCTTTTTATAGCCAGGAGCAGAGACAAGCTTTTGCCCCCTTTCTGTGCTGAG
GACTACACAGAAAGTCTGCTCCAGCTCCACGATGCTGAGATTGTGCGGTTAAAAAACTACTATGAAGTTTCACAAG
GAACCTCTTTGAAGGTGTCCAGAAGTGGGAAGAAACCTGGAGGCTTTTCTTAGAGTTTGAGAGAAAAAGCTTCAGAT
CCAAATCGATTTACAAACCGAGGAGGAAATCTTCTAAAAGAAGAAAAACAACGAGCCAAGCTCCAGAAAAATGCTG
CCCAAGCTGGAAGAAGAGTTGAAGGCACGAATTGAATTGTGGGAACAGGAACATTCAAAGGCATTTATGGTGAAT
GGGCAGAAATTCATGGAGTATGTGGCAGAACAATGGGAGATGCATCGATTGGAGAAAGAGAGAGCCAAGCAGGAA
AGACAACCTGAAGAACAAAAACAGACAGAGACAGAGATGCTGTATGGCAGCGCTCCTCGAACACCTAGCAAGCGG
CGAGGACTGGCTCCCAATACACCGGGCAAAGCACGTAAGCTGAACACTACCACCATGTCCAATGCTACGGCCAAT
AGTAGCATTTCGGCCTATCTTTGGAGGGACAGTCTACCACCTCCCCGTGTCTCGACTTCCTCCTTCTGGCAGCAAG
CCAGTCGCTGCTTCCACCTGTTTCAGGGAAGAAAAACACCCCGTACTGGCAGGCATGGAGCCAACAAGGAGAACCTG
GAGCTCAACGGCAGCATCCTGAGTGGTGGGTACCCTGGCTCGGCCCCCTCCAGCGCAACTTCAGCATTAATTCT
GTTGCCAGCACCTATTCTGAGTTTGCGAAGGATCCGTCCTCTCTGACAGTTCCACTGTTGGGCTTCAGCGAGAA
CTTTCAAAGGCTTCCAAATCTGATGCTACTTCTGGAATCCTCAATTCAACCAACATCCAGTCCCTGAAGGCCCTG
ATCAGTCAACAGCTGTGGCTTCCCTGTGCCTAGACTGGACCTAATTATATGGGGGTGACTTTAGTTTTCTTCAG
CTTAGGAGTGCTTGAAACCTTGCCAGGTCCATGACCATGGGCCTAACTTAAAGATGTGAATGAGTGTTACAGT
TGAAAGCCCATCATAGGTTTAGTGGTCCTAGGAGACTTGGTTTTGACTTATATACATGAAAAGTTTATGGCAAGA
AGTGCAAATTTTAGCATATGGGGCCTGACTTCTTACCACATAATTCTACTTGCTGAAGCATGATCAAAGCTTGT
TTTATTTACCACTGTAGGAAAATGATTGACTATGCCCATCCCTGGGGTAATTTTGGCATGTATACCTGTAACCT
AGTAATTAACATCTTTTTTGTGTTAGGCATGTTCAATTAATGCTGTAGCTATCATAGCTTTGCTCTTACCTGAAGC
CTTGTCCCCACCACACAGGACAGCCTTCCCTCCTGAAGAGAATGCTTTTGTGTGTCCGAAGTTGAGATGGCCTGCC
CTACTGGCAAAGAGGTGACAGGAAGGCTGGGAGCAGCTTTGTTAAATTGTGTTTCAGTTCTGTTACACAGTGCATT
GCCCTTTGTTGGGGGTATGCATGTATGAACACACATGCTTGTGCGAACGCTTTCTCGGCGTTTGTCCCTTGGCTC
TCATCTCCCCCATTCCTGTGCCTACTTTGCCTGAGTTCTTCTACCCCGCAGTTGCCAGCCAGATTGGGAGTCTG
TTGTTTCCAATGGGTTGAGCTGTCTTTGTGCTGGAGATCTGGAACCTTTGCACATGTCACTACTCTTCTTGAAGCACTATTATT
TATTCTTCGCTGTCTGCCTGCAGCAGTACTACTGTCAACATAGTGTAATGGTTCTCAAAGCTTACCAGTGTG
GACTTGGTGTAGCCACGCTGTTTACCTCATACAGTACGTGTCCTGTTTTTAAATATACAATTATTCTTAAAAA
TAAATTAAATCGTATACTTACATTTCAAAAAAAAAAAAAAAAAA

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FIGURE 974

MRRSEVLAEESIVCLQKALNHLREIWELIGIPEDQRLQORTEVVKKHIKELLDMMIAEEESLKERLIKSISVCQKE
LNTLCSELHVEPFQEEGETTILQLEKDLRTQVELMRKQKKERKQELKLLQEODQELCEILCMPHYDIDSASVPSL
EELNQFRQHVTTLRETKASRREEFVSIKRQIILCMEELDHTPDTSFERDVVCEDEDAFCLSLENIATLQKLLRQL
EMQKSQNEAVCEGLRTQIRELWDRLQIPEEEREAVATIMSGSKAKVRKALQLEVDRLEELKMQNMKKVIEAIRVE
LVQYWDQCFYSQEQRQAFAPFCAEDYTESLLQLHDAEIVRLKNYYEVHKELFEGVQKWEETWRLFLFERKASDP
NRFTNRGGNLLKEEKQRAKLQKMLPKLEEELKARIELWEQEHSAFMVNGQKFMHEYVAEQWEMHRLEKERAKQER
QLKNKKQTETEMLYGSAPRTPSKRRGLAPNTPGKARKLNTTMSNATANSSIRPIFGGTVYHSPVSRLPSPSGSKP
VAASTCSGKKTPRTGRHGANKENLELNGSILSGGYPGSAPLQRNFSINSVASTYSEFAKDPSLSDSSTVGLQREL
SKASKSDATSGILNSTNIQS

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FIGURE 975

GCGGATCATCCGCTTCCGGAGTCGAGGTTTTTCGGGCTTGTACCGCTTGGCGGTGCGGCCTGGTGTTCGGCTTGCAG
GTTCTTTCTGTGTTTGTTCCTGCCCCTGCCAAGGCCGTAGAGCTGGTGCGTGCGGGTAGCGGGGCTCTCCGAGGA
GCGCGGCACGCCGCGCACCATGGTCCACCTCACTACTCTCCTCTGCAAGGCCTACCGTGGGGGCCACTTAACCAT
CCGCCTTGCCCCTGGGTGGCTGCACCAATCGGCCGTTCTACCGCATTGTGGCTGCTCACAACAAGTGTCCCAGGGA
TGGCCGTTTCGTAGAGCAGCTGGGCTCCTATGATCCATTGCCCAACAGTCATGGAGAAAACTCGTTGCCCTCAA
CCTAGACAGGATCCGTCATTGGATTGGCTGCGGGGGCCACCTCTCTAAGCCTATGGAAAAGCTTCTGGGTCTTGC
TGGCTTTTCCCTCTGCATCCTATGATGATCACAAATGCTGAGAGACTGCGAAGGAAACGGGCACGTGAAGTCCT
GTTAGCTTCTCAGAAAACAGATGCAGAAGCTACAGATACAGAGGCTACAGAAACATAAATGAGCTGACTTTAGTG
AGCATAGCAGTGGGAACAAGGTCAAGGTCCTTTTGAAACACTGCAGCGATCTTAATTTTGTAGATTGGAGTTC
AATAAATGGAGTATCCTGAAAAAAAAA

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FIGURE 976

MVHLTTLLCKAYRGGHLTIRLALGGCTNRPFYRIVAAHNKCPRDGRFVEQLGSYDPLPNSHGEKLVALNLDRIH
WICGAHLSPMEKLLGLAGFFPLHPMMITNAERLRRKRAREVLLASQKTDAEATDTEATET

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FIGURE 977

GGAGCTCTGGAGGCGGGGCTTCGAGCGTGGCTCGTGGGTTTTCCGTGAAGTCGCGGTGCAGCGGTGGGCGGCATG

TCTGTGGCCGGTGGGGAGATTCTGTGGGGACACGGGGGGAGAGGACACTGCTGCTCCCGGCCGGTTTCAGCTTCAGC
CCGGAGCCACGCTCGAGGACATCCGCCGCTCCATGCTGAGTTTTGCTGCGGAACGAGACTGGGAACAGTTCCAT
CAGCCTCGGAATCTCCTCCTGGCCTTGTTTGGGGAAGTGGGGGAGCTGGCAGAACTCTTTCAGTGGAAAACCGAT
GGGGAACCTGGCCCCCAAGGCTGGTCCCCAGGGAACGGGCAGCCCTTCAAGAGGAGCTTAGTGACGTCCTCATC
TACCTGGTGGCATTAGCAGCCCGCTGCCGTGTGGATCTGCCGCTAGCAGTGCTCTCCAAAATGGACATCAACCGG
CGACGCTACCCAGCCCATCTGGCCCGCAGCTCTTCCCGCAAGTATACAGAATTGCCCCATGGGGCCATCTCTGAA
GACCAGGCTGTGGGGCCTGCGGACATTCCCTGTGACTCCACAGGCCAGACCTCAACCTAGAAAGATGGCCACAGG
ACTTGCAACTCAGGGTGGTGTCTGAAGAGCAGAGAGTGGCCTGGCCCTGGAGCCTTTTTCTAGTCTTTTCAGAAT
AGATCATGGGCCTGAGGCCTCCACTTCTTGAGGTCTGAGGCCCAGCAGCCTCTAGAAGGTAGCCTCCTGGTGTTT
GTTCTCCAGTAAAATGGTTTTGGGCGATAACTTCTAGATTATTCCTGGATGGCCAGGGAGGCTCTCTGTCTCAG
CAGGTGATGACGGGGGTACCAGGGGTGCCTCTGAGACCCATTCTCGTGTTTCCCTGTTGTACCTTTTGCTGCAG
GGCAGAGAGATCTGGTTTCTAGCAAATTCCCAGTAGGATGTCATGTAAGTTCCTTCCCCCTCTTAGAGATTGAAG
GCTGTAAGAGTCCAGATGGTGGAGCCAGGCTGTCTGGGTTCAAATGCCATCTTTGACACTTGCAAGCTAAATGAC
ATTACTCAAATTAATCGTTCTGCACTTCAGCTTCTTGTCTATCAAATAAAAAGAATAGTACCTGCCCAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 978

MSVAGGEIRGDTGGEDTAAPGRFSFSPEPTLEDIRRLHAEFAAERDWEQFHQPRNLLLALVGEVGE LAELFQWKT
DGEFGPQGWSPRERAALQEELSDVLIYLVALAARCRVDLPLAVLSKMDINRRRYP AHLARSSSRKYTELPHGAIS
EDQAVGPADIPCDSTGQTST

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FIGURE 979

GAAGGTCAGCGTGTGAAGTAGGCGCTGGCAACGCGGGGTTACCCTGXTXTATTGAGGAGTAACGGCCCAGCGGAC
CACCCAGGCTTGAGGCAGCGGCGGGAACCACTCGGTTTGCTGCGATACCAATGGAAGGAGGCGGGGGAAGCGGCAA
CAAAACCACAGGGGGATTGGCCGGCTTTTTTCGGAGCCGGCGGAGCAGGTTACTCGCACGCGGATTGGCTGGCGT
CCCGCTAACTGGTATGAACCTCTGTCTCCTTATTTAAATGTGGATCCACGATACCTCGTGCAGGATACAGATGA
GTTTATTTTACCTACCGGAGCTAATAAAACCCGGGGCAGATTTGAGCTGGCCTTCTTTACGATTGGAGGATGTTG
CATGACAGGGGCTGCGTTTGGTGCAATGAATGGTCTTCGGCTAGGATTGAAGGAAACCCAGAACATGGCCTGGTC
CAAACCAAGAAATGTACAGATTTTGAATATGGTGACTAGGCAAGGGGCACCTTTGGGCTAATACTCTAGGTTCTCT
GGCTTTGCTCTATAGTGCATTTGGTGTCTCATTGAGAAAACACGAGGTGCAGAAGATGACCTTAACACAGTAGC
AGCTGGAACCATGACAGGCATGTTGTATAAATGTACAGGTGGTCTTCGAGGGATAGCACGAGGTGGTCTGACAGG
ACTAACACTTACCAGCCTCTATGCACTATATAATAACTGGGAGCACATGAAAGGCTCCTTGCTCCAACAGTCACT
CTGAAGATTTTGCCAACTCATGAATGGAGGACACTTCAGTAGTTCATCTAGGATCCTTTTATTAAGGACAGTTTG
GGAGTTATTTCTCTCT

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FIGURE 980

MEGGGSGNKTGGLAGFFGAGGAGYSHADLAGVPLTGMNPLSPYLNVDPRYLVQDTDEFILPTGANKTRGRFEL
AFFTIGGCCMTGAAFGAMNGLRLGLKETQNMASKPRNVQILNMVTRQGALWANTLGSLALLYSAFGVIEKTRG
AEDDLNTVAAGTMTGMLYKCTGGLRGIARGGLTGLTLTSLYALYNNWEHMKGSLLQQSL

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FIGURE 981

GGCGAAGGAGATCAGCAGGACGCTGCGCACAACATGGGCAACCACCTGCCGCTCCTGCCTGCAGAGAGTGAGGAA
GAAGATGAAATGGAAGTTGAAGACCAGGATAGTAAAGAAGCCAAAAAACCAACATCATAAATTTTGACACCAGT
CTGCCGACATCACATACATACCTAGGTGCTGATATGGAAGAATTTTCATGGCAGGACTTTGCACGATGACGACAGC
TGTCAGGTGATTCCAGTTCTTCCACAAGTGATGATGATCCTGATTTCCCGACAGACATTACCTCTTCAGCTTTTT
CACCTCAAGAAGTCAGTATGGTGCGGAATTTAATTCAGAAAGATAGAACCTTTGCTGTTCTTGACATACAGCAAT
GTACAGGAAAGGGAAGCACAGTTTGGAAACAACAGCAGAGATATATGCCTATCGAGAAGAACAGGATTTTGGAATT
GAGATAGTGAAAGTGAAAGCAATTGGAAGACAAAGTTCAAAGTCCTTGAGCTAAGAACACAGTCAGATGGAATC
CAGCAAGCTAAAGTGCAAATTTCTCCGAATGTGTGTTGCCTTCAACCATGTCTGCAGTTCAATTAGAATCCCTC
AATAAGTGCCAGATATTTCTTCAAACCTGTCTCAAGAGAAGACCAATGTTTCATATAAATGGTGGCAGAAATAC
CAGAAGAGAAAGTTTCATTGTGCAAATCTAACTTCATGGCCTCGCTGGCTGTATTCTTATATGATGCTGAGACC
TTAATGGACAGAATCAAGAAACAGCTACGTGAATGGGATGAAAATCTAAAAGATGATTCTCTTCTTCAAATCCA
ATAGATTTTTCTTACAGAGTAGCTGCTTGTCTTCTATTGATGATGTATTGAGAATTCAGCTCCTTAAATTTGGC
AGTGCTATCCAGCGACTTCGCTGTGAATTAGACATTATGAATAAATGTACTTCCCTTTGCTGTAAACAATGTCAA
GAAACAGAAATAACAACCAAAAATGAAATATTCAGTTTATCCTTATGTGGGCCGATGGAGCTTATGTGAATCCTC
ATGGATATGTGCATGAGACACTTACTGTGTATAAGGCTTGCAACTTGAATCTGATAGGCCGGCCTTCTACAGAAC
ACAGCTGGTTTTCTGGGTATGCCTGGACTGTTGCCCAGTGTAAGATCTGTGCAAGCCCATATTGGATGGGAAGTT
TACGGCCACCAAAAAAGACATGTCACCTCAAAAATTTTGGGGCTTAACGCGATCTGCTCTGTTGCCCACGATCCC
AGACACTGAAGATGAAATAAGTCCAGACAAAGTAATACTTTGCTTGTAACAGATGTGATAGAGATAAAGTTATC
TAACAAATTGGTTATATTCTAAGATCTGCTTTGGAAATTATTGCCTCTGATACATACCTAAGTAAACATAACATT
AATACCTAAGTAAACATAACATTACTTGGAGGGTTGCAGTTTCTAAGTGAACTGTATTTGAACTTTTAAGTAT
ACTTTAGGAAACAAGCATGAACGGCAGTCTAGAATACCAGAAACATCTACTTGGGTAGCTTGGTGCCATTATCCT
GTGGAATCTGATATGTCTGGTAGCATGTCATTGATGGGACATGAAGACATCTTTGGAAATGATGAGATTATTTCC
TGTTGTTAAAAA

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FIGURE 982

MGNHLPLLPAESEEEDEMEVEDQDSKEAKKPNIINFDTSLPTSHTYL GADMEEFHGRTLHDDSDCQVIPVLPQVM
MILIPGQTLPLQLFHPQEVSMVRNLIQKDRTFAVLAYS NVQEREAQFGTTAEIYAYREEQDFGIEIVKVKAIGRQ
RFKVLELRTQSDGIQQAKVQILPECVLPSTMSAVQLES LNKCQIFPSKPVSREDQCSYKWWQKYQKRKFHCANLT
SWPRWLYSLYDAETLMDRIKKQLREWDENLKDDSLPSNP IDFSYRVAACLPIDDLVRIQLLKIGSAIQRLRCELD
IMNKCTSLCCKQCQETEITTKNEIFSLSLCGPMELM

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FIGURE 983

CCCGCGTGATACGGTTGCCGGC**ATG**GCACATTACAACCTTCAAGAAAATTACGGTGGTGCCGTCCGCCAAGGACT
TCATAGACCTCACGTTGTCTGAAAGACTCAACGAAAGACTCCAACCGTTATTTCATAAACATTACCAAATACATCGCA
TTAGACATTTTTTACATGAGAAAAAGTCAAATTTACTCAACAGAATTACCATGATAGACTTTACAAAATTTCTAACAG
ATTTCCCCAAATTGGATGATATTTCATCCGTTCTATGCTGATTTGATGAATATTCTCTACGACAAGGATCATTACA
AGTTGGCTCTGGGGCAAATAAATATTGCCAAAAATTTAGTGGACAATGTTGCTAAAGATTATGTGCGACTGATGA
AGTATGGCGACTCTCTCTACCGCTGCAAACAGCTGAAGCGTGCGGCCCTGGGACGGATGTGCACAGTGATCAAGA
GGCAGAAGCAGAGTTTGGAGTATTTGGAGCAAGTGCCTCAGCATTTATCCCGTTTGCCAACCATGATCCGAATA
CCAGGACCCTGCTTTTTGTGTGGGTACCCAAATGTTGGGAAGTCCAGCTTCATCAACAAGGTGACGAGAGCAGACG
TGGATGTCCAGCCCTATGCGTTCACAACCAAGTCTCTGTTTGTGGGCACATGGATTATAAGTATCTACGTTGGC
AGTTGTAGACACTCCTGGGATCCTGGACCACCCTCTGGAGGATAGGAACACCATCGAGATGCAGGCCATCACTG
CCCTGGCCACCTCCGTGCTGCGGTCTGTATGTGATGGATTTGTCTGAGCAGTGTTGGGCATGGGCTGAGGGAGC
AGCTAGAACTCTTCCAGAACATCAGACCTCTCTTCATCAACAAGCCTCTCATAGTTGTAGCCAACAAATGTGATG
TGAAGAGAATAGCTGAACCTTTCTGAAGATGATCAGAAAATATTTACAGATTTGCAGTCTGAAGGATTCCCTGTAA
TAGAGACCAGCACCTGACTGAGGAAGGTGTTATTAAGTTAAACAGAGGCTTGCGATAGGCTTTTGGCTCATC
GAGTGGAAACCAAATGAAGGGAAATAAAGTGAATGAGGTGCTGAATAGACTGCACCTGGCTATCCCAACCAGGA
GGGACGATAAGGAGAGGCCCCCTTTCATCCCTGAAGGAGTGGTGGCTCGCAGGAAGAGGATGGAAACTGAGGAGT
CCAGGAAGAAGAGGGAACGAGATCTTGAGCTGGAAATGGGAGATGATTATATTTTGGATCTTCAGAAGTACTGGG
ATTTAATGAATTTGTCTGAAAAACATGATAAGATACCAGAAATCTGGGAAGGCCATAATATAGCTGATTATATTG
ATCCAGCCATCATGAAGAAATTGGAAGAATTAGAAAAAGAAGAAGAGCTGAGAACAGCTGCTGGAGAGTATGACA
GTGTATCTGAGAGTGAAGACGAAGAGATGCTGGAAATCCGACAGCTGGCAAAGCAAATTCGAGAGAAAAAGAAGT
TGAAATTTCTGGAGTCCAAAGAAAAGAATACACAGGGACCCAGGATGCCGCGAACTGCTAAGAAGGTTAGAGGA
CAGTTTTGGAGAAGGAGATGCGTAGTCTTGGTGTGACATGGACGATAAAGACGATGCCCATACGCAGTCCAGG
CAAGAAGATCCCGGAGCATCACTAGGAAAAGAAAGCGGGAAGACTCTGCTCCCCCGTCTCTGTGGCCCGGAGTG
GGAGTTGCTCTCGAACTCCACGTGACGTTTCTGGTCTTAGGGATGTCAAGATGGTGAAGAAAGCCAAGACTATGA
AGAATGCTCAGAAGAAGATGAATCGGTTGGGGAAGAAAGGGGAGGCGGATAGACACGTGTTGATATGAAGCCCA
AGCACTTGCTGTCTGGGAAGAGGAAAGCTGGTAAAAAGGACAGGAGAT**TAG**TATCCGTTTGGTTGGCGTGCTTCG
CTAGAGTGTGCTGTTTATTTCTGCTTGGTACAGTATGGTTTCATGAAATTGGAGCTCTGTACAACTGAAAA
AGACAAAATAAGTAAAGCACTTGTTGCTTGTGCTGAAAACTATGGTTAACCTATATAGGTGTGGGAAATTTTGT
CACTGCATAATATTACAAATATTTTGTAGTAGACAGTGTTCACATTTAATGGAGTATCAGTTGCTTCAGATTTT
CAGAACTGGGAAGATTTACTGGTGTAACCTGGGTTGTTTTGTATGGAGAAAAACCTTATTTTCTTTTGTAAAGAGCT
GGGAGCAAACACGTTTATGAGTGTGTCGGAATCCCGTGCTTAAATACGCTCTTAAATTATTTCTAGTCTTATT
TTACAATGTCTCATTTGAGTCTGTCTCAACTATTTTATCCAAATAAACCTCCAGAAGAACTAAAAAAAAAAAA
AAAAAAAAAAAAAA

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FIGURE 984

MAHYNFKKITVVP
SAKDFIDLTLSKT
QRKTPTVIHKHYQ
IHRIRHFYMRKV
KFTQQNYHDRLS
QILTD FPKLDDI
HPFYADLMN
ILYDKDHYKLAL
GQINIAKNLVDN
VAKDYVRLMKY
GDSLYRCKQLK
RAALGRMCTVI
KRQKQSLEY
LEQVRQHLSRL
PTIDPNTRTLL
LCGYPNVGKSS
FINKVTRADV
DVQPYAFTTKS
LFGVGHMDYK
YLRWQVVDT
PGILDHPLE
DRNTIEMQAI
TALAHLRAAV
LYVMDLSEQC
GHLREQLFQ
NIRPLFINKP
LIVVANKCDV
KRIAELS
EDDQKIFTDL
QSEGFPVIET
STLTEEGVI
KVKTEACDR
LLAHRVETKM
KGKVNKVN
EVLNRLHLA
IPTRRDDKE
RPFPIPEG
VVARRKRME
TESRKKRER
DLELEMGGD
YILDQKYWD
LMNLSEKH
DKIPEIWE
GHNIADYID
PAIMKKL
EELEKEEEL
RTAAGEYD
SVSESEDE
EMLEIRQLA
KQIREKKK
LKILESKE
KNTQGPRMP
RTAKKVQRT
VLEKEMR
SLGVDMDD
KDDAHYAV
QARRSR
SITRKRK
REDSAPP
SSVARSG
SCSRT
PRDVSG
LRDVKM
VKKAKT
MKNAQ
KKMN
RLGKKGE
ADRHV
FDMKPK
HLLSG
KRKAG
KKDRR

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FIGURE 985

GGCTGCGAGAAGACGACAGAAGGGGGAAGGGGCTGATGCGAACTGGGGCCACGGTAGCCATCGCGCTTTGCAGTT
CGGTCTCCTGGTGTACGGCCAACGCCAAGTAGGGGATTGCGTTCCCTCCAGTCGCAGACCCTATCAGATTTGGAT
ATGTCCCTTCATATTTGATTGGATTACAGTGGTTTTCAGCAGTGTGCTACAGTTTTTAGGATTATATAAGAAAAC
GGTAAACTGGTATTTCTTGGATTGGATAATGCAGGAAAAACAACATTGCTACACATGCTAAAAGATGACAGACTT
GGACAACATGTCCCAACATTACATCCCACTTCCGAAGAAGTACCATTGCTGGCATGACGTTTACAACTTTTGAT
CTGGGTGGACATGTTCAAGCTCGAAGAGTGTGGAAAACTACCTTCTGCTATCAATGGCATTGTATTTCTGGTG
GATTGTGCAGACCACGAAAGGCTGTTAGAGTCAAAGAAGAAGTATTGATTCACTAATGACAGATGAAACCATTGCT
AATGTGCCTATACTGATTCTTGGGAATAAGATCGACAGACCTGAAGCCATCAGTGAAGAGAGGTTGCGAGAGATG
TTTGGTTTATATGGTCAGACAACAGGAAAGGGGAGTATATCTCTGAAAGAACTGAATGCCCGACCCTTAGAAGTT
TTCATGTGTAGTGTGCTCAAAAGACAAGGTTACGGAGAAGGCTTCCGCTGGATGGCACAGTACATTGATTAACAC
AACTCACATTGGTTCCAGGTCTCAACGTTACGGCTTACTCAGAGATTTGATTGCTCAACATGCATAACTTGAAT
TCAATAGACTTTTGCTGGTTATAAAACAGATGTTTTTTAGATTATTAATATTAAATCAACTTAATTTGAATGAGA
ATTGAAAAGTATTCAAGTAAGTTTGAGTATCACAATGTTAGCTTTCTAATTCCATAAAAAGTACTTGGTTTTTAC
AGTTTATAATCTGACATCACCCAGCGCCATTTGTAAAGAGCAACTTTCCAGCAGTACATTTGAAGCACTTTTTA
ACAACATGAACTATAAACCATATTTAAAAGCTCATCATGTTAAATTTTTTATGTACTTTTCTGGAACTAGTTTT
TAAATTTTAGATTATATGTCCACCTATCTTAAGTGTACAGTTAATAATTAGCTTATTCAATGATTGCATGATGCC
TTACAGTTTTCAATAACTTTTTTCTTATGCAAACGTCATGCAATAAAACAACTCTAATGTTTGGCAAAAAA
AAAAA

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FIGURE 986

MSFIFDWIYSGFSSVLQFLGLYKKTGKLVFLGLDNAGKTTLLHMLKDDRLGQHVPTLHPTSEELTIAGMTFTTFD
LGGHVQARRVWKNYLPAINGIVFLVDCADHERLLESKEELDSLMTDETIANVPILILGNKIDRPEAISEERLREM
FGLYGQTTGKGSISLKELNARPLEVFMCSVLKRQGYGEGFRWMAQYID

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FIGURE 987A

CCGGCCCCGGCCCCGGCCCCAGCCGCTCCTGCTGGGCGCCCCAACCGGGTCCGGCCCCGGGGGGCGGGGGCCGC
GGCCGCCGAGGATGCGGGGAAATCCAACAGCAAGTTGAAGCCCCGAAGTTGTGGAGGAGCTGACCAGGAAGACCTACT
TTACCGAGAAGGAGGTCCAGCAGTGGTACAAAGGCTTCATCAAGGACTGCCCCAGTGGGCAGCTGGATGCGGCAG
GCTTCCAGAAGATCTACAAGCAATTCTTCCCGTTTCGGAGACCCACCAAGTTTGCCACATTTGTTTTCAACGTCT
TTGATGAAAACAAGGACGGGCGAATTGAGTTCTCCGAGTTTCATCCAGGCGCTGTCGGTGACCTCACGGGGAACCC
TGGATGAGAAGCTACGGTGGGCCTTCAAGCTCTACGACTTGACAATGATGGCTACATCACCAGGAATGAGATGC
TGGACATTGTGGATGCCATTTACCAGATGGTGGGAATACCGTGGAGCTCCCAGAGGAGGAGAACACTCCTGAGA
AGAGGGTGGACCGGATCTTTGCCATGATGGATAAGAATGCCGACGGGAAGCTGACCCTGCAGGAGTTCCAGGAGG
GGTCCAAGGCAGACCCGTCCATTGTGCAGGCGCTGTCCCTCTACGACGGGCTGGTATAGTCCCAGGCTGGAGCTG
GATGCTGGGAACCACTCACCTCCTTCTGTGCCATGAGGCCACCTCAGCCCTGACACCAACCCCGTGCCTCCACC
CAGCCTTCTTCCGCATCCACACACAGCCGGCTGCCCTTGACCCGGGAGGCCCCGGCTCTCCTCTCCCTGTCTTG
CACCCATCCCCCGCTGAAGCCACCGGCTCCAATTGCCAGCAACCTCTGCTTGTCCGGAACGACAACACGAAA
TGGAAAAGGCTACAGCCCTCTGCATAAACCAAGGACTTGCTGCTCGCAGGCAGCCTCCGTTCTCCCGCTCTC
TTGCGCGTGTGCTTTTGTTTTTTATTTTGAACAGACGTTTTTAAAGAAAAAACAACACTACCTTCTGTCTTAGA
AGACACAGACTGACAGATGGGGTGAAGGCTGGGGACCTCAGAGAACTCTGCCTTGCCCTCGTCCCTCGTCTTC
GGCAGCCGGAGAGGCTGTGGGTGGGCGAGGGTGTCTAGGGTTCTGCCTAGTCAACGTTATTTGTCGTCCCATC
TTTTGGCAGCAAAACCACCTGCGTGGCTAGGATGATTAATTATGAGGATGATGATTTTTTTTTGTGATAACAGTAT
TGTGCTTTTTGTGGGGAAAGTGAGGTTTTTTTTTATATACATATATAATTGATATCTTTAATTTATTGGTTGTT
AACTGTTGCTGCTGCCTGGTGTGCTCAGCTCCCAGGGCTGCGGGCCACCCTTTACATGTGCACGCCCTGACC
CACCTGCCCCACGCCGACTTGGGAGGATGGTGGCCTGCAGCGGCCAAGAAGCCAAAAAAATTTTTTTTTTTTCAG
ATACTGTGCTTGATTTTTGGAGAGGGGAGAGGTGGAATTCCTAAATGGCTAATGCACTGTTCCCTCCAGCCCGA
ATGCCTCCTGCCAAACCCCTTTTCCCTGCTGCCTCTGTCCCCGCATCCTGTTCTCCCTGGGTCCGTAACATTT
TTCCGAGGATGAACAGGGGACATCTTTAGGTTTCTCAACTCTTGCTTTGGTGTGTCGCGCAGCATGGAACAG
GGCGCTAAGGCTGGGAGCTGGAAGAAGGGGCATTGGGTACCCAGGCAGAGTCAGGAGAGGTGGTCTTTGAAGTA
AGTTAGCAGAAATCAAGGGGACCCCGCCTCCTTGGGCTGGGGAGGGGATTTCAGATAGTTTCATAACTCTCTCC
CGCTCTGCCTTCCCTCCTTCTATCTGCTTTTTCCAGTAACTGCATGGTGTCTTCCCTGGCCTTCTCTTGGCT
CAAAGGCTGGGAGGGAGGGAAGGAGAGAAGAGTTCCAGGCAATCCCATCAATATAGTCCCTACACCTGGGGCTGC
GGCCACATGTCTTACGGAGGCTTCCAGCGGTGCCTGCCACTGAGGCAGGTGCGGCCCCAGGACCATCACCAGG
AATGCGAGGCCACCCTGGACCAGAGGTAGGAGCCCCAAGGTCCGGCCCTTGCTCTTTGATTGTGGGCAGCCTCCTG
CCCTCTCTGGGTCTCAGTTGCCCCATCTGCAGAGCGAGGAGGCCCGGGCTGGTTGGTCTTGAAGGCCCTTTTCCA
TGCCGACATCATGTCACTCTAGGCCTGGGGTTTCACTTCTGTGGCTGGTGATGCTGTGGTTAAGTTTGCTTGAC
CCCAGCAGCCCCGAGGGACTGTCTGAGTCACAGCACAGCCCCATTGCGTGGCTGCTGGTGTGTGGGGTCACTTCC
AGCAGATGAATGTGTATGTGGCACACCTTGTCCCTTCCCGCAGCATTTCCTGGTTCCCCCAGACCCTTGAGCG
CTCTTTGGGACCCAGAAGGAGTCCTTGACAGGGAAGGCTTGAGGTGAGAAGCCGCTTCCAGACTGTTCAGGGCC
AGGCCCTGGGTCTAGAATTCTTGCTGCTGCTTTGCAGAGTCAACAGCCCATCAGCCCATGTTTTAGAGGGGACACT
TTGGTCTCGGTTCCACCCCTCAGCAAGCAGGCCTCCAGCCCAGGAAGGCCTCTGCCGTAGTGACGTTGCCGTG
TGGGGCTGCGTGGCTGTTCCCTTGGCTGGAGCATTACAGCCAACCCAGCGTCCCCCTGAGGCGTTTATTGGCA
GCCCCCTAGGACTGCACGCTGGCCCCACGGTAACCCCCCTCCCCACCAACATCCTGCAGGGATGGGGTCACTG
GTTCCACCTTACAGGCCACTTTGAAGGGTGGATTCTTTGAGGCCCTGCCAGTCGGCTCCCTGCTCAGCTGCTG
GCCCCGGCGACCTGGGACTCAGCACCAACGGCTGAAGTTTCTCAGCTGGGCTCTGACCTGGGGTCTGGGGCAGGG
AACGAACATGGTGGCTTTGGGCTGAGAGGATGAGGGAGGTCTTTCCAGGTCAAATTACTTTCTTTGGCCTCTG
CCTGAGGCTCGATTTGCCTCTCTGGTCCAATGGGACTGACACTGTTGTACAACCTGACCTGTGGCTGAGGGTGTG
TGGGCTTAAGCATGTGGACCCCTTCGGTGTGTCTGGCCTTCTCCATCGTCTGCTTGTGGCCTTTTGGCTTTGA
AGCCACAGGTGTGGCTTCTGGCCTTAGCAGATGGTATGCTTGGCGACCGCAGCCAGCATGCCGGTGGGCCACA
GCCCCAGCCAGCCAGAGCTGCCGGAAGGGCCGCCCTTCCCGGCCCTGGCGGGGTGCTGGACACTGGCCATTTTC
ACTAGAGTTTGCCTGGCAGGGACCGATCTCTGCCCCCTCCTCTCCCCAGGCCTCTGGCTGCAGTGATGCCGAGA
ATCCTGAGCCAGGTGCCTCCTGAGCAGCCGTGCGCTCTCCACAGCGCGTTTGCCACCCAATGCGGCTCGCTT
CAGATGCTCTGATGCAGAGGGCACGCCATAGTCCCTCTGCAGAGCCTCGCACTGGGGCCAGGGCAGGCACCAGC

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FIGURE 987B

CCCAGGCGGCCAGTCGGCCACGGCCTGTCCCTCTTCCTCGTAGCGTCTGCTCCTCACTTTGTGTTGATGGTGACTT
AGGAGAATGTTCCGATTTTCCATGATCTAAGCAGGCCACGTTTAAAATAACATCAAGGCAAGCGTACGTGTCACC
CTCTGTACTGACATCTCCTCCCCTGAAATGCTTTTCAGTTTGACAGCCCGTTTCCTAGACAAGTGCACCTGGGGT
TTCAGGAACCTTTGTGTTTTTTCGGAGGGGGTTGGTGGGGAGGTCGGGATGCCTGGGATCCCTTCCTGGAGAGGCA
GGCTGTCTCTGGAAAAAGCCTCCATTGCCCCACCCGCCAGGCGGAAAGTCACCCTGTTCCCAGCGCGGTTTCAGCA
TTTAATTTTAAGGGAGCTAAGGAAGCGCGGCGCGCCCCCTGGTGGTGGTAAGCCGCCAACGCACCTGGGGGCTGC
AACCCACCGGACGGGTGGTCCGGAGGGAGGCTGGAGCGGGGAGGCGAGGAGGGGGCTGTGAGTCCTCAGAGGCC
CTGGGCCACCACATTTCTGGCAGCGTTTCCCAGACACCCCTCTGCTAGGCCATCCCTGGATAGCAAGTGAATTAA
CTTAAGGGCACTGTGATGGGAAGCCTTGCCCCCTCTTTTTTTTTTTTTTTTTTAATATCTGCGGAATAAACCCAA
TGTTAATTTTGAATGAATAAAAGGCTTTTGTTGAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 988

MGKSNSKPKPEVVEELTRKTYFTEKEVQQWYKGF IKDCPSGQLDAAGFQKIYKQFFPF GDPTKFATFVFNVDEN
KDGRIEFSEFIQALSVTSRGTLDKLRWAFKLYDLNDGYITRNEMLDIVDAIYQMGNTVELPEEENTPEKRVD
RIFAMMDKNADGKLTQEFQEGSKADPSIVQALSLYDGLV

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FIGURE 989

AGAGCTCGCGGTGGACTCCGACCCGGCGCAACATGGCCCGCAGCCTCGCCTCTGCGCGACTGCCAGGCCTGGAAGG
ATGCGAGGCTCCCGCTCTCCACCACAAGCAACGAAGCCTGCAAGCTGTTTCGATGCCACGCTGACCCAGTATGTAA
AATGGACCAATGACAAGAGTCTCGGTGGCATCGAGGGCTGCCTGTCAAAGCTCAAAGCAGCAGATCCAACCTTTG
TGATGGGCCACGCCATGGCTACTGGCCTTGTGCTGATTGGCACTGGAAGCTCCGTGAAGCTGGACAAAGAGCTGG
ACCTGGCTGTGAAGACAATGGTGGAGATTTCAAGAACCCAGCCGCTGACAAGGCGGGAGCAGCTGCACGTGTCTG
CAGTAGAGACATTTGCCAATGGGAACCTTTCCGAAAGCCTGTGAACCTATGGGAACAGATTCTCCAGGACCACCCGA
CAGACATGTTGGCCCTGAAATTTTCCCATGATGCTTATTTTACCTGGGCTATCAGGAACAGATGAGAGATTCTG
TTGCTCGAATTTACCCCTTCTGGACACCTGACATCCCCCTAAGCAGCTATGTGAAAGGCATCTACTCTTTTGGCT
TGATGGAAACCAACTTCTACGACCAGGCAGAAAACTCGCCAAAGAGGCTTTATCTATTAACCCGACAGACGCAT
GGTCGGTGCACACCGTCGCTCACATCCACGAGATGAAAGCAGAGATCAAGGATGGGTGGAATTCATGCAGCACT
CAGAGACCTCTGGAAGGACTCTGATATGTTGGCTTGTCTATAACTATTGGCACTGGGCTTTATATCTGATTGAGA
AGGGCGAATATGAGGCCGCGCTGACCATCTACGATACCCACATCCTTCCCAGCCTGCAGGCCAACGATGCAATGC
TGGACGTGGTGGACAGCTGCTCCATGCTCTACCGCCTGCAGATGGAAGGAGTGTCTGTGGGCCACGGTGGCAGGA
TGCTCTGCCTGTGGCCCCGAAGCACAGCCGAGACCACATCCTGCTGTTCAATGACGCACACTTCTTCGATGGCATC
CCTGGGTGCACACGACCCCCAGACCACACAGGAGCTGCTGACCACCTGCGGGACGCCAGCGAATCCCCAGGGGA
GAACTGCCAGCACCTCCTGGCCCCGAGACGTGGGGCTGCCCTGTGCCAGGCCCTGGTGGAGGCTGAGGACGGGAA
CCCTGACCGCGTCCCTGGAGCTGCTCCTGCCCATCCGCTACCGGATCGTCCAGCTCGGTGGGAGCAATGCCAGAG
AGACGTCTTCAACCAGCTGCTGATTCACGCGGCCTTAAACTGCACCTCCAGCGTCCATAAGAACGTAGCCCGGAG
CCTTCTGATGGAGCGTGATGCCTTGAAGCCCCAACTCGCCCCCTGACCGAGCGGCTCATCCGCAAGGCAGCTACCGT
CCACCTCATGCAGTGAGCCAGCCTGGCCGCTCCACCCTGCAGAACCTCAGTGGTGGCGTCACTGCGTCCAGTCAG
CTGCTCCACCGGGTTAGGGTCAGGAGACGGCCAGAGCCTGTTTGTAGGGCTGTTAGAGGGTGATCTTCAGTTTT
ACAGGAAGTGGGTACCGGGTTAATTTTAAATGTGATTCCGAATCTCCTTTCAGTCCTCGAGAAGGGCCAATGAGC
ATTTTTTCAGCAGTCACAGCCAGTGTGAGTGCTGCTCTTTCCACCTGCCTTGCAAATCTGTTTCCCAGGGGAATG
TGTCTACTGCCTGGTGGTTCAAAGGTTGGAAGGCAGTGCAAGGTGGGGGCTGATTCTGCTGGGACAGGTCTTCC
AGAGGCAGCCTCCCCCCTGCTGTCCCCGTCCCCACCAGGCTGCCCTTGGGATGGACCTTTTCATTCTTTTCT
TTATATTCTAGACAGTCTCTGTTGTCTCATTGTGTTGCTGTCCATTTTTCAGGTGAGGGTACCGGGGTAGGGGA
GTGGCCTGCCCAGGGTCACACTATGAGAGGCCCCACCTGCTGCCTTTGGACGCAGCCCCCTGCTGCTGCATCCA
CCACCCTTCTTACAGATCAGCGCGCACATGGGGTCTTCTGCTGTCTCTGGGGCGAGTCTTGGAGCCCCCTGGGG
GGCTCTGTTGGTGTGATTGACCCGTTTCTCTTTTAAACTGCACATCATAACAGGGCTTCATGTGAGCATG
ATTTTAATCATAAATGCACTTCTGAGGTGCAAGGATTGAGCTCAGAGCTGCTCTGTTGTGGCAAACCCAAAGTG
CTGTGATGTGTGGCTGTGACAAGCCTGGAGCGGGTCTGTGAGCGCCGCTCTGTCTCCTGCTTCTCACTGAAC
GCCTGCTGAATGTGCCGCTGACTCAGCTGTGCTGCTTTCAGCCCTCCTGTGAGGGGCGGTCCCAGTGCACAGATG
TTTTTCAAGTTCCTCAGTTTGTACTGAAATTAGGGATTATCAGGGCAGGAAGCAGGCAGGCCTCTCAGAAGGGA
GAGGAGGCCTCCAAATCTATTGAGTCCCCACAGTTTGCTCAAGCCCAGGCAAAATTTCTGTGATTAAATGAATTC
ATCAGTTCCTCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 990

MAAASPLRDCQAWKDARLPLSTTSNEACKLFDATLTQYVKWTNDKSLGGIEGCLSKLKAADPTFVMGHAMATGLV
LIGTGSSVKLDKELDLAVKTMVEISRTQPLTRREQLHVS AVETFANGNFPKACELWEQILQDHPTDMLALKFSD
AYFYLG YQE QMRDSVARIYPFWTPDIPLSSYVKGIYSFGLMETNFYDQAEKLAKEALSINPTDAWSVHTVAHIHE
MKAEIKDGLEFMQHSETLWKDSDMLACHNYWHWALYLIEKGEYEAALTIYDTHILPSLQANDAMLDVVDSCSMY
RLQMEGVSVGHGGRMSCLWPGSTAETTSCCSMTHTS

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FIGURE 991

CGGACGCGTGGGCGAGGTGGCAATTGGGGAAGGGGTTCTGGGCTGCCGAGGCACACAGGCCAGAGCTTCGTGGA
TACCTGCAGGGCCCAAAGGTCCCTCCCTGTTTTGAAGAGTGAGTGATGGCTATGAGGTAGCGGCCAGGCTGATCA
CCCCTGCGTTGGCTGGAGGCAGAATTCTGTAAATCCTCGCCAAGTCTTTCTCCAGGCCACTGGTTAGCTCATCTC
AGCCTCCTCTGGGAGCATCAACACCAACATGGCACAGGGGACTGCAGTGGTGTGCTTTGGACCTGTGTACCCACC
CAAGGCTAAAGGCAGAGCCAGATGGAGAAGGAAAAGGCAAGTGACTTGTCCAGAGCCACTCTGTCAAAAGGGGACT
TGAGTCCTCAGGGCTGTTGACTCCAAAGCTGACAAGCAGGAGCCAAGTTACACCCTGTTTAACCCTGCCTTCAAA
GGGACGACTCTGTAAAGATTCTCTGCTACTTATTCAAGTTGACACGATGCCCTTCACACTCCACCTGAGGTCCCGC
CTTCCCTCTGCCATAAGGAGTTTGATTCTACAAAAGAAACCAACATCAGAAATACATCCAGCATGGCTGGAGAG
CTCCGACCAGCCAGCCTGGTGGTCTGCCCAGGTCCCTTGCTCCAGCTTTTGAAAGATTCTGCCAGGTCAACACT
GGTCTCTACCCCTGCTGGGCCAGAGTGAGCCAGAAAAGTGGATGCTGCCCCCTCAAGGTGCTATCTCAGAGACC
AGGATGGGCCATCCCCAGTTCTGGAAATACGAGTTCCGGTGCCTGCACCGGTAGCCTGGCTTCGCTGGAGCAGTAC
TCGGAGCAGCTGAAGGACATGGTGGCCTTCTTCTGGGCTGCAGCTTCTCCCTGGAGGAGGCCCTTGAGAAAGCG
GGGCTCCCCAGAAGAGACCCAGCAGGTACAGCCAGACAACAGTGCCTTGTTACCCATGCTGGCTTCTGCTGC
CCTCTGGTGGTCACGATGAGGCCATTCCCAAGGACAAGCTGGAAGGGCTGGTGCGGGCCTGCTGCTCCCTCGGA
GGTGAGCAGGGGCAACCTGTTACATGGGCGACCCAGAAGCTGTTGGGAATCAAAGAGCTTTCCAAACCTGCCTAC
GGGGATGCCATGGTGTGTCCCCAGGGGAGGTTCCAGTGTTCTGGCCTTCTCCGCTGACCAGTCTCGGAGCTGTC
AGCAGCTGTGAGACCCCACTGGCTTTTGCCAGCATCCCAGGCTGCACAGTTATGACTGACCTGAAGGATGCAAAG
GCTCCACCTGGTTGTCTACCCAGAGAGAATTCCAGAGGTCCATCACATTTCCCAAGATCCTCTGCACTACAGC
ATCGCGTCAGTCTCTGCTTCTCAGAAGATCAGAGAACTAGAGTCTATGATCGGCATAGACCCAGGGAACCGGGG
ATTGGGCACCTGCTCTGTAAAGATGAGCTGCTGAAGGCCTCTCTCTCGCTGTCCATGCCCGCTCAGTGCTCATC
ACCCTGGGTTCCCCACACATTTCAATCATGAGCCTCCAGAAGAGACAGATGGCCCACCAGGAGCTGTTGCTCTG
GTTGCCCTTCTGCAGGCCTTGGAAGAGGAGGTCGCCATAATCGTTGACCAGAGAGCCTGGAACCTGCACCAGAAG
ATTGTTGAAGATGCTGTTGAGCAAGGTGTTCTGAAGACGCAGATCCCGATATTAACTTACCAAGGTGGATCAGTG
GAAGCTGCTCAGGCATTCTGTGCAAAAATGGGGACCCGACACCTAGATTTGACCACCTGGTGGCCATAGAG
CGTGCCGGAAGAGCTGCTGATGGCAATTACTACAATGCAAGGAAGATGAACATCAAGCACTTGGTTGACCCCAT
GACGATCTTTTTCTTGCTGCGAAGAAGATTCTGGAATCTCATCAACTGGAGTCGGTGATGGAGGCAACGAGCTT
GGGATGGGTAAAGTCAAGGAGGCTGTGAGGAGGCACATACGGCACGGGGATGTCATCGCCTGCGACGTGGAGGCT
GACTTTGCCGTCATTGCTGGTGTCTTAAGTGGGGAGGCTATGCCCTGGCCTGCGCACTCTACATCCTGTACTCA
TGTGCTGTCCACAGTCAGTACCTGAGGAAAGCAGTCGGACCTCCAGGGCACCTGGAGATCAGGCCTGGACTCAG
GCCCTCCCGTCGGTCATTAAAGGAAGAAAAATGCTGGGCATCTTGGTGCAGCACAAAGTCCGGAGTGGCGTCTCG
GGCATCGTGGGCATGGAGGTGGATGGGCTGCCCTTCCACAACACCCACGCCGAGATGATCCAGAAGCTGGTGGAC
GTCACCACGGCACAGGTGTAAACCGTCCATGTTCCGTGTGAGCAGAGTCCCTACCAACGGGCAGGTCTGCATCCGG
GGAGAATGCAGCTGCTTCTGGCGACAATCCTGCTAGTAAACACTGGTCTTCCGGTGAGCAACGAACACTCGCCTGG
CCTGGGAAACTGCATGCCCACTTTCTGGGAGGGGTTAGTGCAGGTGCCGTGGACAAAGGACAACATTTCTCTGGG
GCTTTTTAACTTTTATTCCTAAGACTCTAAAGGCGTTGATTTCAACCCTCCTTCACTCTGGCTTCTTCAGGCAAC
CCACGTGGTCTCCTGTGAGAATCTTCTCGACAGTTACTTATGGGGACACTTGTGAACAATTAAGTCCAGGCAGA
GCATGAGAACAAACATTCCCAGGCCATGTAGGATAGGATACTCCAGACTCCAGTCATCTCCCCCATCCATGGTT
TCTGTTACTCATGGTTTCAGTTACTCATAGCCAAGTGCAGACCGAAAATACTAAATGAAAATTTTCAGAAATAAA
CAACTCTTAAGTTTTAAAAAAAAAAAAAAAAA

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FIGURE 992

MPFTLHLRSRLPSAIRSLILOKKPNIRNTSSMAGELRPASLVVLPRSLAPAFERFCQVNTGPLPLLQSEPEKWM
LPPQGAISETRMGHPQFWKYEFGACTGSLASLEQYSEQLKDMVAFFLGCSFSLEEALAKAGLPRRDPAGHSQTTV
PCVTHAGFCCPLVVTMRPIPKDKLEGLVRACCSLGGEQGPVHMGDPPELLGIKELSKPAYGDAMVCPPEVPVFW
PSPLTSLGAVSSCETPLAFASIPGCTVMTDLKDAKAPPGCLTPERIPEVHHISQDPLHYSIASVSASQKIRELES
MIGIDPGNRGIGHLLCKDELLKASLSLSHARSVLITTFGPTHFNHEPPEETDGPPGAVALVAFLQALEKEVAIIV
DQRAWNLHQKIVEDAVEQGVLTQIPILTYQGSVEAAQAFCKNGDPQTPRFDHLVAIERAGRAADGNYYNARK
MNIKHLVDPIDDLFLAAKKIPGISSTGVGDGGNELGMGKVKEAVRRHIRHGDVIACDVEADFAVIAGVSNWGGYA
LACALYILYSCAVHSQYLRKAVGPSRAPGDQAWTQALPSVIKEEKMLGILVQHKVRSVSGIVGMEVDGLPFHNT
HAEMIQKLVDVTTAQV

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FIGURE 993

GGGCAAACCCTTTGAAAAATATTCTAAATGAAAATGACATAGTATTTCATAGTGGAAAAAGTGCCTTTAGAAAAGG
AAGAAACAAGTCATATTGAAGAACTTCAATCTGAAGAACTGCCATATCTGATTTCTCTACTGGCGAAAAATGTTG
GACCACCTTGCTTTACCAGTTGGGAAGGCAAGGCAGTTAATTGGACTTTACACCATGGCTCACAATCCTAATATGA
CCCATTGGAAGATTAATCTGCCTGTTACTGCCCTTCCCCCCTTTGGGTAAAGATGTGACAGTTTCAGATCCTGAAG
GTACTTGTGGCTAGGAGCTGAGCTTATCACAACAAACAACAGCATTACAGGAATTGTCTTATATGTGGTCAGTT
GTAAAGCTGATAAAAAATTATTCTGTAAATCTTGAAAACCTAAAAAATTTACACAAGAAAAGACATCACTTGTCTA
CTGTAAACATCCAAAGGCTTTGCCAGTATGAGCTCTTTAAGTCCTCTGCCTTGGATGATACAATCAGCATCAC
AAACTGCGATCGCTTTGGATATTTCTGGAGTCTGTGGATGAGATTCTTCAAATCCCTCCACTCTCTTCAACTG
CAATCTGAATATTAAAGTGAATCAGGAGAGCCCAGAGGTCCTTTGAATCATCTCTACAGAGAAGTGAATTTCT
TCTTGTTTTGGCTGATGGTTTGGAGACTGGTGTCACTGAATGGCTCGAGCCCCTGGAAGCAAAATCTGCTGTTGA
ACTTGTTCAGGAATTTCTGAATGACTTAAATAAGCTGGATGGATTGGTGATTCTACAAAAAAGACACTGAGGT
TGAGACCTTGAAGCATGACACTGCTGCAGTCGATCGTTCCGTCAAGCGTCTTTTCAAAGTTTCGGAGTGATCTTGA
TTTTGCTGAGCAACTGTGGTGCAAAATGAGCAGTAGTGTGATTTTCATACCAAGACTAGGTGAAGTGTTTCACATT
GATCATCCAGAGTCTACAACGTGGTGATATACAGCCATGGCTCCATAGTGGAAGTAACAGTTTACTAAGTAAGCT
CATTCATCAGTCTTATCATGGAACCATGGACACAGTTTCTCTCAGTGGGACTATTCCAGTTCAAATGCTTTTGGGA
AATTGGTTTGGACAACTAAAGAAAGATTATATCAGTTTTTTTCATAGGTCAGGAACCTGCATCTTTGAATCATT
GGAATACTTCATTGCTCCATCAGTAGATATACAAGAACAGGTTTATCGTGTCCAAAACTCCACCATATTCTAGA
AATATTAGTCAGTTGCATGCCTTTTATTAAATCTCAACATGAACCTCCTCTTTTCTTTAACACAGATCTGCATAAA
GTATTACAAACAAAAATCCTCTTGATGAGCAACACATTTTTTCAGCTGCCAGTCAGACCAACTGCTGTAAAGAACTT
ATATCAAAGTGAGAAGCCACAGAAATGGAGAGTGGAAATATATAGTGGTCAAAAGAAGATTAAAGACAGTTTGGCA
ACTGAGTGACAGCTCACCCATAGGCCATCTGAATTTTACAAACCTGATTTTTCGGAATTAACACTAAGCGGTAG
CCTGGAAGAAAGGATATTCTTTACTAACATGGTTACCTGCAGCCAGGTGCATTTCAGTGAAGTGTGCTGATGAA
GTCTCTATAAGCACAAAGCC

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FIGURE 994

MAHNPNMTHLKINLPVTALPPLWVRCDSSDPEGTCWLGAELITTNNSITGIVLYVVSCKADKNYSVNLENLKNLH
KKRHHLSTVTSKGFAQYELFKSSALDDTITASQTAIALDISWSPVDEILQIPPLSSTAI

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FIGURE 995

GTTTCGGAGCGGGCGAGCGGAGTTAGCAGGGCTTTACTGCAGAGCGCGCCGGGCACTCCAGCGACCGTG GGGGATCA
GCGTAGGTGAGCTGTGGCCTTTTGCGAGGTGCTGCAGCCATAGCTACGTGCGTTTCGCTACGAGGATTGAGCGTCT
CCACCCAGTAAGTGGGCAAGAGGCGGCAGGAAGTGGGTACGCAGGGGCGCAAGGCGCACAGCCTCTAGACGACTC
GCTTTCCCTCCGGCCAACCTCTGAAGCCGCGTCCCTACTTTGACAGCTGCAGGGCCGCGGCCTGGTCTTCTGTGCT
TCACCATCTACATAATGAATCCCAGTATGAAGCAGAAACAAGAAGAAATCAAAGAGAATATAAAGAATAGTTCTG
TCCCAAGAAGAACTCTGAAGATGATTGAGCCTTCTGCATCTGGATCTCTTGTTGGAAGAGAAAAATGAGCTGTCCG
CAGGCTTGTCCAAAAGGAAACATCGGAATGACCACTTAACATCTACAACCTCCAGCCCTGGGGTTATTGTCCAG
AATCTAGTGAAAATAAAAAATCTTGAGGAGTCAACCCAGGAGTCATTTGATCTTATGATTAAAGAAAAATCCATCCT
CTCAGTATTGGAAGGAAGTGGCAGAAAAACGGAGAAAGGCGCTGTATGAAGCACTTAAGGAAAAATGAGAACTTC
ATAAAGAAATTGAACAAAAGGACAATGAAATTGCCCGCCTGAAAAAGGAGAATAAAGAACTGGCAGAAGTAGCAG
AACATGTACAGTATATGGCAGAGCTAATAGAGAGACTGAATGGTGAACCTCTGGATAATTTTGAATCACTGGATA
ATCAGGAATTTGATTCTGAAGAAGAACTGTTGAGGATTCTCTAGTGAAGACTCAGAAATTGGCACGTGTGCTG
AAGGAACTGTATCTTCCTCTACGGATGCAAAGCCATGTATATGAATGCATTAATATTTGACTGTTGAGAATTTT
ACTGCCGAAGTTTACCTCCACTAGTTCTTTGTAGCAGAGTACATAACTACATAATGCCAACTCTGGAATCAAATT
TCCTTGTTTGAATCCTGGGACCCTATTGCATTAAAGTACAAATACTATGTATTTTAAATCTATGATGGTTTATGT
GAATAGGATTTTCTCAGTTGTCAGCCATGACTTATGTTTATTACTAAATAAACTTCAAACCTCTGTGGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 996

MNPSMKQKQEEIKENIKNSSVPRRTLKMIQPSASGSLVGRENELSAGLSKRKHRNDHLTSTTSSPGVIVPESSEN
KNLGGVTQESFDLMIKENPSSQYWKEVAEKRRKALYEALKENEKLHKEIEQKDNEIARLKKENKELAEVAEHVQY
MAELIERLNGEPLDNFESLDNQEFDSEETVEDSLVEDSEIGTCAEGTVSSSTDAKPCI

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FIGURE 997

ACGAGGGGAGCTCCGGCTGCGTCTTCCCGCAGCGCTACCCGCCATGCGCCTGCCGCGCCGGGCCGCGCTGGGGCT
CCTGCCGCTTCTGCTGCTGCTGCCGCCCCGCGCCGAGGCCGCCAAGAAGCCGACGCCCTGCCACCGGTGCCGGGG
GCTGGTGGACAAGTTTAAACCAGGGGATGGTGGACACCGCAAAGAAGAAGCTTTGGCGGCGGGGAACACGGCTTGGGA
GGAAAAGACGCTGTCCAAGTACGAGTCCAGCGAGATTTCGCTGCTGGAGATCCTGGAGGGGCTGTGCGAGAGCAG
CGACTTCGAATGCAATCAGATGCTAGAGGCGCAGGAGGAGCACCTGGAGGCCTGGTGGCTGCAGCTGAAGAGCGA
ATATCCTGACTTATTCGAGTGGTTTTGTGTGAAGACACTGAAAGTGTGCTGCTCTCCAGGAACCTACGGTCCCGA
CTGTCTCGCATGCCAGGGCGGATCCCAGAGGCCCTGCAGCGGGAATGGCCACTGCAGCGGAGATGGGAGCAGACA
GGGCGACGGGTCCTGCCGGTGCCACATGGGGTACCAGGGCCCGCTGTGCACTGACTGCATGGACGGCTACTTCAG
CTCGCTCCGGAACGAGACCCACAGCATCTGCACAGCCTGTGACGAGTCCTGCAAGACGTGCTCGGGCCTGACCAA
CAGAGACTGCGGCGAGTGTGAAGTGGGCTGGGTGCTGGACGAGGGCGCCTGTGTGGATGTGGACGAGTGTGCGGC
CGAGCCGCTCCCTGCAGCGCTGCGCAGTTCTGTAAGAACGCCAACGGCTCCTACACGTGCCAAGATGTGGACGA
GTGCTCACTAGCAGAAAAAACCTGTGTGAGGAAAAACGAAAATGCTACAATACTCCAGGGAGCTACGTCTGTGT
GTGTCTGACGGCTTCGAAGAAACGGAAGATGCCTGTGTGCCGCCGCGCAGAGGCTGAAGCCACAGAAGGAGAAAG
CCCGACACAGCTGCCCTCCCGCGAAGACCTGTAATGTGCCGGACTTACCCTTTAAATTATTCAGAAGGATGTCCC
GTGGAAAATGTGGCCCTGAGGATGCCGTCTCCTGCAGTGGACAGCGGCGGGGAGAGGCTGCCTGCTCTCTAACGG
TTGATTCTCATTGTCCCTTAAACAGCTGCATTTCTTGGTTGTTCTTAAACAGACTTGTATATTTTGATACAGTT
CTTTGTAATAAAATTGACCATTGTAGGTAATCAGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 998

MRLPRRAALGLLPLLLLLPPAPEAAKKPTPCHRCRGLVDKFNQGMVDTAKKNFGGGNTAWEEKTL SKYESSEIRL
LEILEGLCESSDFECNQMLEAQEEHLEAWWLQLKSEYPDLFEWFVCVTKLVCCSPGTYPDCCLACQGGSGRPCSG
NGHCSGDGSRQGDGSCRCHMGYQGPLCTDCMDGYFSSLRNETHS ICTACDESCKTC SGLTNRDCGECEVGWVLDE
GACVDVDECAAEP PP CSAAQFCKNANGSYTCEDVDECSLAEKTCVRKNENCYNTPGSYVCVCPDGF EETEDACVP
PAEAEATEGESPTQLPSREDL

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FIGURE 999

[illegible]

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FIGURE 1000

MPLDPYHSVTWGHAQGSHHFVFGELRVRPILES LRDEPDPPRPSREGPAGRVGALARDGPEPCDAASPPGGASC
APELARPREDKSAQQAKLEGGTRLCCRCPEESRLVPGGAVSPGDHVLEVSGTRGTCGCRPRRHAGPELAHS

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FIGURE 1001

CGCTGTTGTTAGTCACCGCGGAGCCGCCGAAACCTGCAGGAGTCTACTATGCAACTGCATACTGGATGCCTGCTG
AAAAGACAGTACAAGTCAAAAATGTAATGGACAAGAAATGGGGACGCCCTATGGCTTTTACAATAACTCTGTGAAAA
CCACAGGCTGGGGCATCCTGGAGATCAGAGCTGGCTATGGCTCTCAAACCCTGAGCAATGAGATCATCATGTTTG
TGGCTGGCTTTTGGAGGGTTACCTCACTGCCCCACACATGAATGACCACTACACAAACCTCTACCCACAGCTGA
TCACGAAACCTTCCATCATGGATAAAGTGCAGGATTTTATGGAGAAGCAAGATAAGTGGACCCGGAAAAATATCA
AAGAATACAAGACTGATTCATTTTGGAGACATACAGGCTATGTGATGGCACAATAGATGGCCTCTATGTAGGAG
CAAAGAAGAGGGCTATATTAGAAGGGACAAAGCCAATGACCCTGTTCCAGATTCACTTCCTGAATAGTGTGGAG
ATCTATTGGATCTGATTCCCTCACTCTCTCCACAAAAAACGGCAGCCTAAAGGTTTTTAAGAGATGGGACATGG
GACATTGCTCCGCTCTTATCAAGGTTCTTCTGGATTTGAGAACGTCCTTTTTTGCTCACTCAAGCTGGTACACGT
ATGCAGCCATGCTCAGGATATATAAACACTGGGACTTCAACATCATAGATAAAGATACCAGCAGTAGTCGCCTCT
CTTTCAGCAGTTACCCAGGGTTTTTGGAGTCTCTGGATGATTTTTACATTCTTAGCAGTGGATTGATATTGCTGC
AGACCACAAACAGTGTGTTTAATAAAACCTGCTAAAGCAGGTAATACCCGAGACTCTCTGTCTGGCAAAGAG
TCCGTGTGGCCAATATGATGGCAGATAGTGGCAAGAGGTGGGCAGACATCTTTTCAAATACAACCTCTGGCACCT
ATAACAATCAATACATGGTTCTGGACCTGAAGAAAGTAAAGCTGAACCACAGTCTTGACAAAGGCACTCTGTACA
TTGTGGAGCAAATTCCTACATATGTAGAATATTCTGAACAACTGATGTTCTACGGAAAGGATATTGGCCCTCCT
ACAATGTTCCCTTCCATGAAAAATCTACAACCTGGAGTGGCTATCCACTGTTAGTTCAGAAGCTGGGCTTGGACT
ACTCTTATGATTTAGCTCCACGAGCCAAAATTTTCCGGCGTGACCAAGGGAAAGTGACTGATACGGCATCCATGA
AATATATCATGCGATACAACAATTATAAGAAGGATCCTTACAGTAGAGGTGACCCCTGTAATACCATCTGCTGCC
GTGAGGACCTGAACTCACCTAACCCAAGTCCTGGAGGTTGTTATGACACAAAGGTGGCAGATATCTACCTAGCAT
CTCAGTACACATCCTATGCCATAAGTGGTCCACAGTACAAGGTGGCCTCCCTGTTTTTCGCTGGGACCGTTTCA
ACAAAACCTCTACATCAGGGCATGCCAGAGGTCTACAACCTTTGATTTTATTACCATGAAACCAATTTTGAACTTG
ATATAAAATGAAGGAGGGAGATGACGGACTAGAAGACTGTAAATAAGATACCAAAGGCACTATTTTAGCTATGTT
TTTCCCATCAGAATTATGCAATAAAATATATTAATTTGTCAAAAAAAAAAAAAAAAAA

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FIGURE 1002

MPAEKTVQVKNVMDKNGDAYGFYNNSVKTTGWGILEIRAGYGSQTLSNEIIMFVAGFLEGYLTAPHMNDHYTNLY
PQLITKPSIMDKVQDFMEKQDKWTRKNIKEYKTDSEWRHTGYVMAQIDGLYVGAKKRAILEGTPMTLFIQFLN
SVGDLLDLIPSLSPKNGSLKVFKRWDMGHCSALIKVLPGFENVLFAHSSWYTYAAMLRIYKHWDNFNIIDKDTSS
SRLSFSSYPGFLESLLDFYILSSGLILLQTNSVFNKTLKQVIPETLLSWQVRVANMMADSGKRWADIFSKYN
SGTYNNQYMLDLKKVKNHSLDKGTLYIVEQIPTTYVEYSEQTDVLRKGYWPSYNNVFFHEKIYNWSGYPLLVOKL
GLDYSYDLAPRAKIFRRDQGVTD TASMKYIMRYNNYKKDPYSRGDPCNTICCREDLNSPNPSPGGCYDTKVADI
YLAQYTSYASGPTVQGGLPVFRWDRFNKTLHQGMPEVYNFDFITMKPILKLDIK

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FIGURE 1003

CGGAAGCAGGAAGTGAGTTTGCGAACGGAGCAGCTGCTGCAGGGCCCCATGGCGGACACCCAGTACATCCTGCCCCA
ATGACATCGGCGTGTCTAGCCTGGACTGCCGTGAGGCCTTCCGCCTGCTGTCACCCACAGAGCGCCTCTATGCCT
ACCACCTGTCCCGTGCCGCCTGGTACGGAGGCCTGGCTGTGCTGCTTCAGACCTCCCCTGAGGCCCCCTACATCT
ATGCTCTGCTCAGCCGCCTCTTCCGCGCCAGGACCCGACCAGCTGCGCCAACATGCCCTGGCTGAAGGCCTTA
CCGAGGAGGAGTATCAGGCGTTCTTGGTCTATGCCGCGGGTGTCTTACTCCAACATGGGCAACTACAAGTCCTTTG
GTGACACCAAGTTTGTTCCTCAACTTGCCCAAGGAAAAGCTGGAACGGGTGATCCTAGGGAGTGAGGCTGCTCAGC
AGCACCCAGAAGAAGTCAGGGGCCTCTGGCAGACCTGCGGGGAGCTTATGTTCTCTCTGGAGCCAAGGCTTCGAC
ACCTCGGACTGGGGAAGGAGGGAATCACCACCTATTTCTCTGGGAATTGTACCATGGAAGATGCCAAATTGGCCC
AGGACTTTCTGGACTCACAGAACCTCAGTGCCTACAACACCCGGCTCTTCAAAGAGGTGATGGAGAAGGGAAGC
CCTACTACGAGGTGCGGCTGGCTTCTGTGCTTGGCTCAGAGCCTTCCCTGGACTCTGAGGTGACTTCCAAGCTGA
AGAGCTATGAATTCGGGGAAGCCCTTTCCAGGTGACCCGGGGGGACTACGCGCCCATCCTCCAGAAGGTGGTG
AGCAGCTGGAGAAAGCCAAGGCCTATGCAGCCAACAGCCACCAGGGGCAGATGCTGGCCCAGTATATAGAGAGCT
TCACCCAGGGCTCCATCGAGGCCCCACAAGAGGGGCTCCCGCTTCTGGATCCAGGACAAAGGCCCCATCGTGAGGA
GTTACATCGGGTTCATCGAGAGCTACCGCGACCCCTTTGGTTCCCGAGGAGAATTTGAAGGTTTCGTAGCTGTGG
TGAACAAGGCCATGAGTGCCAAGTTTGAGCGGCTGGTGCGAGCGCAGAGCAGCTGCTGAAGGAGCTGCCCTGGC
CCCCAACCTTTGAGAAGGACAAGTTCCTCACCCCTGACTTCACCTCCCTGGATGTTCTCACCTTCGCTGGCTCCG
GCATCCCTGCCGGCATCAACATCCCCAACTACGATGATCTGAGGCAGACGGAAGGCTTTAAGAACGTGTGCTGG
GGAATGTGCTGGCTGTGGCCTACGCCACGCAGCGGGAGAAGCTTACCTTTCTGGAGGAGGATGACAAGGACCTGT
ACATCCTCTGGAAGGGGGCCCTCCTTCGATGTGCAGGTGGGCCTGCACGAGCTGCTGGGCCATGGCAGTGGCAAGC
TCTTCGTACAGGACGAAAAAGGAGCATTCAACTTTGACCAGGAAACAGTGATCAACCCAGAGACGGGCGAGCAGA
TTCAGAGCTGGTATCGGAGCGGGGAGACCTGGGATAGCAAGTTCAGCACCATCGCCTCCAGCTACGAAGAGTGCC
GGGCTGAGAGCGTGGGTCTCTACCTCTGTCTCCACCCGCAAGTGTGAGATCTTTGGCTTTGAGGGGGCTGATG
CGGAGGACGTGATCTACGTGAAGTGGCTCAACATGGTTCGGGCCGGGCTGCTCGCTCTGGAGTTCTACACACCTG
AGGCCTTCAACTGGCGACAGGCCCATATGCAGGCCCGGTTTGTGATCCTGAGAGTCTTGCTGGAGGCTGGCGAGG
GACTCGTTACCATCACTCCACACAGGCTCCGATGGGCGCCAGATGCCCGGGTCCGCCTCGACCGCAGCAAGA
TCCGGTCTGTGGGCAAGCCTGCTCTAGAGCGCTTCTGCGGAGACTTCAGGTGCTGAAGTCCACAGGGGATGTGG
CCGGAGGGCGGGCCCTGTACGAGGGGTATGCAACGGTCACTGATGCGCCCCCGAGTGCTTCTCACCCCTCAGGG
ACACGGTGCTGCTGCGTAAGGAATCTCGGAAGCTCATTGTTACGCCAACACTCGCCTTGAAGGCTCAGACGTGC
AGCTTCTGGAATACGAGGCGTCAGCTGCTGGCCTCATCCGATCCTTCTCTGAGCGTTTCCAGAGGATGGACCCG
AGTTGGAGGAGATCCTCACACAGCTGGCCACAGCCGATGCCCGATTCTGGAAGGGCCCCAGTGAGGCCCCATCTG
GCCAAGCTTGAAGGAAGATGTGTGGCCTTGCCCCCAATTCCATCAGACCAAGGCTGCAAGTGGCCCTCCATTTCGTG
TGTGTATTTAGGGGCTGGGGAGGGGGAGGGGCAGGAGCTTGGACCTTGGTACTACCTCAGCTGAGGGTGGTGACA
CAACCCCTTCCATTTGTCTAGCACTTTCCAGCCTGCCAATTGCTTCCCTCTGTGATCTCATTTTCATCTGCACTGC
CATACGTGGAGTGAGCAAGACAGGGCTTACCATCCTGTCTACCAGATGAGGAAATGGCAGTTCTGAGAAGTCACT
GGTCTAGATCCCGCAGGTGGCACGTGACAGCTAGGGTTCAAACGTTCTCACCAAATCCAATGCTCCTCACATAT
TAATTTTATAACCAGACAAATAAATATTAGAGACAACCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1004

MADTQYILPNDIGVSSLDCREAFRLLSPTERLYAYHLSRAAWYGGLAVLLQTSPEAPYIYALLSRLFRAQDPDQL
RQHALAEGLTEEEYQAFVLVYAAGVYSNMGNYSFGDTKFVPNLPKEKLERVILGSEAAQQHPPEVRGLWQTCGEL
MFSLEPRLRHLGLGKEGITTTFSGNCTMEDAKLAQDFLDSQNL SAYNTRLFKEVDGEGKPYEVRLASVLGSEPS
LDSEVTSKLKSYEFRGSPFQVTRGDYAPILQKVVEQLEKAKAYAANSHQGQMLAQYIESFTQGSIEAHKRGSRFW
IQDKGPIVESYIGFIESYRDPFGSRGEFEGFVAVVNKAMSAKFERLVASAEQLLKELPWPPTFEKDKFLTPDFTS
LDVLTTFAGSGIPAGINIPNYDDL RQTEGFKNVSLGNVLAVAYATQREKLTFL EEDDKDLYILWKGPSFDVQVGLH
ELLGHGSGKLFVQDEKGAFNFDQETVINPETGEQIQSWYRSGETWDSKFSTIASSYEECRAESVGLYLCLHPQVL
EIFGFEGADAEDVIYVNWLNMMVRAGLLALEFYTPEAFNWRQAHMQARFVILRVLLEAGEGLVTITPTTGSDGRPD
ARVRLDRSKIRSVGKPALERFLRRLQVLKSTGDVAGGRALYEGYATVTDAPPECFLTTLRDTVLLRKESRKLIVQP
NTRLEGSDVQLLEYEASAAGLIRSFSEFPEDGPELEEILTQLATADARFWKGPSEAPSGQA

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FIGURE 1005A

CGATAACGATTTGTGTTGTGAGAGGCGCAAGCTGCGATTTCTGCTGAACTTGGAGGCATTTCTACGACTTTTCTC
TCAGCTGAGGCTTTTCCCTCCGACCCTGATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCTTGAGA
AATGGATGGTCTTCACAATACCCTCTTCAATCCCTTCTGACTGGTTATCAGTGCAGTGGTAATGATGAACACACT
TCTTATGGAGAAACAGGAGTCCCAGTTCCTCCTTTTGGATGTACCTTCTCTTCTGCTCCCAATATGGAACATGTA
CTAGCAGTTGCCAATGAAGAAGGCTTTGTTTCGATTGTATAACACAGAATCACAAAGTTTCAGAAAGAAGTGCTTC
AAAGAATGGATGGCTCACTGGAATGCCGTCTTTGACCTGGCCTGGGTTCCTGGTGAACCTTAACTTGTACAGCA
GCAGGTGATCAAACAGCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCATCAATGC
AGCCTCAAGTCAGTTGCCCTTTCTAAGTTTGAGAAAGCTGTATTCTGTACGGGTGGAAGAGATGGCAACATTATG
GTCTGGGATACCAGGTGCAACAAAAAGATGGGTTTTATAGGCAAGTGAATCAAATCAGTGGAGCTCACAATACC
TCAGACAAGCAAAACCCCTTCAAACCCCAAGAAGAAACAGAATTCAAAGGACTTGCTCCTTCTGTGGATTTCCAG
CAAAGTGTTACTGTGGTCTCTTTCAAGACGAGAATACCTTAGTCTCAGCAGGAGCTGTGGATGGGATAATCAA
GTATGGGATTTACGTAAGAATTATACTGCTTATCGACAAGAACCCATAGCATCCAAGTCTTTCCCTGTACCCAGGT
AGCAGCACTCGAAAACTTGATATTCAAGTCTGATTTTGGATTCCACTGGCTCTACTTTATTTGCTAATTGCACA
GACGATAACATCTACATGTTTAAATATGACTGGGTGGAAGACTTCTCCAGTGGCTATTTTCAATGGACACCAGAAC
TCTACCTTTTATGTAAAATCCAGCCTTAGTCCAGATGACCAGTTTTTAGTCAGTGGCTCAAGTGATGAAGCTGCC
TACATATGGAAGGTCTCCACACCCTGGCAACCTCCTACTGTGCTCCTGGGTCAATTCTCAAGAGGTCACGTCTGTG
TGCTGGTGTCCATCTGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACACTAAAAATCTGGCGCTTGAAT
AGAGGCTTAGAGGAGAAACCAGGAGGTGATAAACTTCCACGGTGGGTGGGCCTCTCAGAAGAAAAAGAGTCA
AGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCCTGCCAAAGCCCCAGGGTAAAGTGCAATCCATCC
AATCTTCCCCGTCATCCGCAGCTTGTGCCCCAAGCTGTGCTGGAGACCTCCCTCTTCTTCAAATACTCCTACG
TTCTCTATTAACCTCTCCTGCCAAGGCCCGGTCTCCCATCAACAGAAGAGGCTCTGTCTCCTCCGTCTCTCCC
AAGCCACCTTCATCTTTCAAGATGTCGATTAGAACTGGGTGACCCGAACACCTTCCTCATCACCACCCATCACT
CCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATTCCTGTGAGCCAGAAGTCATCCCAAGCA
GAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAGACTCAAGCTGTCTGGAGAGTGTGAAACAAAAG
TGTGTGAAGAGTTGTAACGTGTGTGACTGAGCTTGATGGCCAAGTTGAAAATCTTCATTGGATCTGTGCTGCCTT
GCTGGTAACCAGGAAGACCTTAGTAAGGACTCTCTAGGTCTACCAAATCAAGCAAAATTGAAGGAGCTGGTACC
AGTATCTCAGAGCCTCCGTCTCCTATCAGTCCGTATGCTTCAGAAAAGCTGTGGAACGCTACCTCTTCTTTGAGA
CCTGTGGGAGAAGGTCTGAAATGGTAGGCAAAGAGAATAGTTCCCCAGAGAATAAAAACTGGTTGTTGGCCATG
GCAGCCAAACGGAAGGCTGAGAATCCATCTCCACGAAGTCCGTATCCAGACACCCAATTCCAGGAGACAGAGC
GGAAAGACATTGCCAAGCCCGGTACCATCACGCCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAAG
TCCCAGGAGGACTTCTGTGGTCTGAACTCAACAGAATTATAGATTCTAATCTGAGTGAGTTACTGAGCTTTG
GTCCACTAAAACAAGCTGAGCTTTGGTCCACTAAAACAAGATGAAAAATACAAGAGTGACTCTATAACTCTGGTC
TTTAAGAAAGCTGCCTTTTCAATTTTATAGACAAAATCTTTTCAACGCTGAAATGTACCTAATCTGGTTCTACTACC
ATAATGTATATGCAGCTTCCCAGGATGAATGCTGTGTTTAAATTTTATAAAGTAAATTTGTCACTCTAGCATT
TGAATGAATAGTCTTCACTTTTTAAATTATTATCTTCTCTATAATAATGACATCCAGTTTATGGAGGCAAAAA
ACAAGTTTCTTGTATCCTGAAACTTTCTATGCTCAGTGGAAGTATCTGCCAGCCACAGCATGAGGCCTGTGAA
GGCTGACTGAGAAATCCTCTGCTGAAGACCCCTGGTCTGTCTGCTCCAACATGTATAATTTTATTTGAAATA
CATAATCTTTTCACTATGCTTTTGTGGGGTTTTTTTAAAGTATGTGTAAAAATGTGATGCTCAGATAAGTACATT
TATATCAGTTCAGTGTTAAATGCAGTCTCTTGAGTTAAAGTCATCTTTATTTTAAATGCAGTGATAAATGTCAA
CTCTTCGGAGAACTAGGAGAACAAACAGAAAGCTGTGTTTGTCTTTTTTCTCTCAAATATATCTCCCGTATG
AGATTTTCAAGTCCCATGTTTTTACCAAGCAATCTGCTATGTCAGCCAACCAACATCACTTTCTACAGGAGGTT
ATGATTTTTGCCATTTACTAGAGGAAGATGTTTTATGAAATCAATTTGGGGTTTGAATTCAGGTGCAGTCATCAG
TTCTTTAGGGGCTGCAATGTTTTAAAAAAATAAGTCATCAGATTTTAAAGAAAAAGTGATGATTTCTTATTGAT
ATTTTTGTAACAGAATATAGCTCTTAAGTAAATAATGTGCAAAATATCTTAAACATCCCTCCCTTATTCAACAATT
CATAAAAAGCAATAGCCTTTTAGTATAGATAGCCCTGAGCCAAAAAGTAATAGAATTTTCTCTAGATATTTAATA
CAGAGAGTGATAGACTGACTCTAAGTTAATAATGTGCAAAATATCTTAAACATCCCTCCCTTATTCAACAATT
ATGTATCAGTGATCTTGAACCATTGTTTTATATTTTTTACCTTTGTAACCTCATGGAAAGAGGCTTTACATACTT
TCTATGTACTATTTACTTAGAAGGGAGCCCCCTTCCAGTCATGAACTTCATTTGTTTTATCCATATCCCTGAGG

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FIGURE 1005B

ACTGTGTAGACTTTATGTCAGTTCTGTGTAGACTTTATGTCAGTTTTTGTCAATTATTTGAAAATCTATTCTGACA
ACTTTTAAATTCCTTTGATCTTATAAGTTAAAGCTGTAACAACTGAAATTGCATGGATCAAGTAAGCATAGTTTT
ATCCAGGGAGAAAAATAAAAGGAAGCCATAGAATTGCTCTGGTCAAAACCAAGCACACCATAGCCTTAACTGAAT
ATTTAGGAAATCTGCCTAATCTGCTTATATTTGGTGTTTGTTTTTGACTGTTGGGCTTTGGGAAGATGTTATTT
ATGACCAATATCTGCCAGTAACGCTGTTTATCTCACTTGCTTTGAAAGCCAATGGGGGAAAAAATCCATGAAAA
AAAAAAGATTGATAAAGTAGATGATTTTGTGTTGTATCCCTACCCATCTCCTGGCAGCCCTACTGAGTGAAATTGG
GATACATTTGGCTGTCAGAAATTATACCGAGTCTACTGGGTATAACATGTCTCACTTGGAAGCTAGTACTTTTA
AATGGGTGCCAAAGGTCACTGTAATGAGATAATTATCCCTGCCTGTGTCCATGTCAGACTTTGAGCTGATCCTG
AATAATAAAGCCTTTTACCTT

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FIGURE 1006

MLFNSVLRQPQLGVLRNGWSSQYPLQSLLTGYQCSGNDEHTSYGETGVFVPPFGCTFSSAPNMEHVLAVANEEGF
VRLYNTEQSFRKKCFKEWMAHWNVFDLAWVPGELKLVTAAGDQTAKFWDVKAGELIGTCKGHQCSLKSVAFSK
FEKAVFCTGGRDGNIMVWDTRCNKKDGFYRQVNQISGAHNTSDKQTPSKPKKKQNSKGLAPSVDFQQSVTVVLFQ
DENTLVSAGAVDGI IKVWDLRKNYTAYRQEP IASKSFLYPGSSSTRKLGYSLLILDSTGSTLFANCTDDNIYMFNM
TGLKTSPVAIFNGHQNSTFYVKSSLSRDDQFLVSGSSDEAAYIWKVSTPWQPPTVLLGHSQEVTSVCWCPSDFTK
IATCSDDNTLKIWRLNRGLEEKPGDKLSTVGWASQKKKESRPGLVTVTSSQSTPAKAPRVKCNPSNSSPSSAAC
APSCAGDLPLPSNTPTFSIKTSPAKARSPINRRGSVSSVSPKPPSSFKMSIRNWVTRTPSSSPPI TPPASETKIM
SPRKALIPVSQKSSQAEACSESRNRVKRRLDSSCLESVKQKCVKSCNCVTELDGQVENLHLDLCLAGNQEDLSK
DSLGP TKSSKIEGAGTSISEPPSPISPYASESCGTLPLPLRPCGEGSEMVGKENS SPENKNWLLAMAAKRKAENP
SPRSPSSQTPNSRRQSGKTLPSPTITPSSMRKICTYFHRKSQEDFCGPEHSTEL

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FIGURE 1007

GCACGAGGGAAGAGGGTGATCCGACCCGGGGAAGGTCGCTGGGCAGGGCGAGTTGGGAAAAGCGGCAGCCCCCGCC
GCCCCCGCAGCCCCCTTCTCCTCCTTTCTCCACGTCTATCTGCCTCTCGCTGGAGGCCAGGCCGTGCAGCATCG
AAGACAGGAGGAAGTGGAGCCTCATTGGCCGGCCCCGGGGCGCCGGCCTCGGGCTTAAATAGGAGCTCCGGGCTCT
GGCTGGGACCCGACCGCTGCCGGCCGCGCTCCCGCTGCTCCTGCCGGGTGATGGAAAACCCAGCCCGGCCGCCG
CCCTGGGCAAGGCCCTCTGCGCTCTCCTCCTGGCCACTCTCGGCGCCGCCGGCCAGCCTCTTGGGGGAGAGTCCA
TCTGTTCCGCCAGAGCCCCGGCCAAATACAGCATCACCTTCACGGGCAAGTGGAGCCAGACGGCCTTCCCCAAGC
AGTACCCCCTGTTCCGCCCCCTGCGCAGTGGTCTTCGCTGCTGGGGGCCGCGCATAGCTCCGACTACAGCATGT
GGAGGAAGAACCAGTACGTACGTACGTAACGGGCTGCGCGACTTTGCGGAGCGCGGCGAGGCCCTGGGCGCTGATGAAGG
AGATCGAGGCGGCGGGGGAGGCGCTGCAGAGCGTGCACGCGGTGTTTTCGGCGCCCGCCGTCCCCAGCGGCACCG
GGCAGACGTGGCGGAGCTGGAGGTGCAGCGCAGGCACTCGCTGGTCTCGTTTGTGGTGCGCATCGTGCCAGCC
CCGACTGGTTCTGTGGGCGTGGACAGCCTGGACCTGTGCGACGGGGACCGTTGGCGGGAACAGGCGGCGCTGGACC
TGTACCCCTACGACGCCGGGACGGACAGCGGCTTCACCTTCTCCTCCCCAACTTCGCCACCATCCCGCAGGACA
CGGTGACCGAGATAACGTCCCTCCTCTCCCAGCCACCCGGCCAACTCCTTCTACTACCCGCGGCTGAAGGCCCTGC
CTCCCATCGCCAGGGTGACACTGGTGCGGCTGCGACAGAGCCCCAGGGCCTTCATCCCTCCCGCCCCAGTCTTGC
CCAGCAGGGACAATGAGATTGTAGACAGCGCCTCAGTTCCAGAAACGCCGCTGGACTGCGAGGTCTCCCTGTGGT
CGTCTGGGGACTGTGCGGAGGCCACTGTGGGAGGCTCGGGACCAAGAGCAGGACTCGCTACGTCCGGGTCCAGC
CCGCCAACAACGGGAGCCCCCTGCCCCGAGCTCGAAGAAGAGGCTGAGTGCGTCCCTGATAACTGCGTCTTAAGACC
AGAGCCCCCGCAGCCCCCTGGGGCCCCCGAGCCATGGGGTGTCGGGGGCTCCTGTGCAGGCTCATGCTGCAGGCGG
CCGAGGCACAGGGGGTTTCGCGCTGCTCCTGACCGCGGTGAGGCCGCGCCGACCATCTCTGCACTGAAGGGCCCT
CTGGTGGCCGGCACGGGCATTGGGAAACAGCCTCCTCCTTTCCCAACCTTGCTTCTTAGGGGGCCCCGTGTCCCG
TCTGCTCTCAGCCTCCTCCTCCTGCAGGATAAAGTCATCCCCAAGGCTCCAGCTACTCTAAATTATGGTCTCCTT
ATAAGTTATTGCTGCTCCAGGAGATTGTCCTTCATCGTCCAGGGGCCTGGCTCCACGTGGTTGCAGATACCTCA
GACCTGGTGCTCTAGGCTGTGCTGAGCCCACTCTCCCGAGGGCGCATCCAAGCGGGGGCCACTTGAGAAGTGAAT
AAATGGGGCGGTTTCGGAAGCGTCAGTGTTTCCATGTTATGGATCTCTCTGCGTTTGAATAAAGACTATCTCTGT
TGCTCAC

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FIGURE 1008

MENPSPAAALGKALCALLLATLGAAGQPLGGESIC SARAPAKYSITFTGKWSQTAFPKQYPLFRPPAQWSSLLGA
AHSSDYSMWRKNQYVSNGLRDFAERGEAWALMKEIEAAGEALQSVHAVFSAPAVPSGTGQTSAELEVQRRHSLVS
FVVRIVPSPDWFVGVDSLDLCDGDRWREQAALDLYPYDAGTDSGFTFSSPNFATIPQDTVTEITSSSPSHPANSE
YYPRLKALPPIARVTILVRLRQSPRAFI PPAPVLP SRDNEIVDSASVPETPLDCEVSLWSSWGLCGGHCGR LGTKS
RTRYVRVQPANNGSPCPELEEEAECPDNCV

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FIGURE 1009

GCTGGAGCCGGGCGGGGCGGATGTGGAGCGCGGGCCGCGGCGGGGCTGCCTGGCCGGTGCTGTTGGGGCTGCTGC
TGGCGCTGTTAGTGCCGGGCGGTGGTGCCGCCAAGACCGGTGCGGAGCTCGTGACCTGCGGGTCGGTGCTGAAGC
TGCTCAATACGCACCACCGCGTGCGGCTGCACTCGCACGACATCAAATACGGATCCGGCAGCGGCCAGCAATCGG
TGACCGGCGTAGAGGCGTCGGACGACGCGAATAGCTACTGGCGGATCCGCGGCGGCTCGGAGGGCGGGTGCCCGT
GCGGGTCCCCGGTGCGCTGCGGGCAGGCGGTGAGGCTCACGCATGTGCTTACGGGCAAGAACCTGCACACGCACC
ACTTCCCGTCGCCGCTGTCCAACAACCAGGAGGTGAGTGCCTTTGGGGAAGACGGCGAGGGCGACGACCTGGACC
TATGGACAGTGCGCTGCTCTGGACAGCACTGGGAGCGTGAGGCTGCTGTGCGCTTACAGCATGTGGGCACCTCTG
TGTTCTGTGTCAGTCACGGGTGAGCAGTATGGAAGCCCCATCCGTGGGCAGCATGAGGTCCACGGCATGCCCAGTG
CCAACACGCACAATACGTGGAAGGCCATGGAAGGCATCTTCATCAAGCCTAGTGTGGAGCCCTCTGCAGGTCACG
ATGAACCTCTGAGTGTGTGGATGGATGGGTGGATGGAGGGTGGCAGGTGGGGCGTCTGCAGGGCCACTCTTGGCAG
AGACTTTGGGTTTGTAGGGGTCCTCAAGTGCCTTTGTGATTAAAGAATGTTGGTCTATGA

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FIGURE 1010

MWSAGRGGAAPVLLGLLLALLVPGGGAAGTGAELVTCGSVLKLLNTHHRVRLHSHDIKYSGSGQQSVTGVEAS
DDANSYWRIRGGSEGGCPCGSPVRCGQAVRLTHVLTGKNLHTHHFSPLSNNQEVSAFGEDGEGEDDLDLWTVRCS
GQHWEREAAVRLQHVGTSVFLSVTGEQYGSPIRGQHEVHGMP SANTHNTWKAMEGIFIKPSVEPSAGHDEL

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FIGURE 1011

ACCTCCGGAAACCGTAGATTCCGGGCGGTCTGGAGCCGCCGGGAGCTGTAGTTCTCCCGCGGCTCAGAGAAGTAGG
CAGAGAGCGGACCTGGCGGCCGGGCAGCATGGCGGGGCTGGAGCTCTTGTCGGACCAGGGCTACCGGGTGGACGG
GCGGCGCGCCGGGGAGCTGCGCAAGATCCAGGCGCGGATGGGCGTGTTTCGCGCAGGCTGACGGCTCGGCCTACAT
TGAGCAGGGCAACACCAAGGCACTGGCTGTGGTCTACGGCCCGCACGAGATCCGGGGCTCCCGGGCTCGAGCCCT
GCCGGACAGGGCCCTAGTGAAGTGTCAATATAGTTTACGCGACCTTCAGCACAGGTGAGCGCAAGCGACGGCCACA
TGGGGACCGTAAGTCCTGTGAGATGGGCCTGCAGCTCCGCCAGACTTTCGAAGCAGCCATCCTCACACAGCTGCA
CCCACGCTCCCAGATTGATATCTATGTGCAGGTGCTACAGGCAGATGGTGGGACCTATGCAGCTTGTGTGAATGC
AGCCACGCTGGCAGTGCTGGATGCCGGGATACCCATGAGAGACTTTGTGTGTGCGTGCTOAGCTGGCTTCGTGGA
CGGCACAGCCCTGGCGGACCTCAGCCATGTGGAGGAAGCAGCTGGTGGCCCCCAGCTGGCCCTGGCCCTGCTGCC
AGCCTCAGGACAGATTGCGCTGCTTGAGATGGATGCCCGGCTGCACGAGGACCACCTGGAGCGGGTGTGGAGGC
TGCTGCCCAGGCTGCCCCGAGATGTGCACACCCTCTTAGATCGAGTGGTCCGGCAGCATGTGCGTGAGGCCTCTAT
CTTGCTGGGGGACTTGACCACCCAGCCACCCATGTCCAGAATAAACCTCCTTGCCCACACXXXXXXXXXXXX

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FIGURE 1012

MAGLELLSDQGYRVDGRRAGELRKIQARMGVFAQADGSAYIEQGNTKALAVVYGPHEIRGSRARALPDRA LVNCQ
YSSATFSTGERKRRPHGDRKSCMGLQLRQTFEAAILTQLHPRSQIDIYVQVLQADGGTYAACVNAATLAVLDAG
IPMRDFVCACSAGFVDGTALADLSHV EEAAGGPQLALALLPASGQIALLEMDARLHEDHLERVLEAAAQAARDVH
TLLDRVVRQHVREASILLGD

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FIGURE 1013

CCGCTTCCCCGTCTTGTACACCCCTAACTCCTGAGGCTCCTCCGAATCACGCGAGTGGAAGCGGAGAAGCTCAAG
TGGCCGCCATGTCAGAGGCTTATTTCCGAGTGGAGTCGGGTGCGCTGGGGCCTGAGGAGAACTTTCTTTCTTTGG
ACGACATCCTGATGTCCCACGAGAAGCTGCCGGTGCGCACGGAGACCGCCATGCCTCGCCTTGGCGCTTTCTTCC
TGGAGCGGAGCGCAGGCGCCGAGACTGACAACGCGGTCCACAGGGTTCCAAGCTTGAACCTACCCTTGTGGCTGG
CAAAAGGACTTTTTGACAACAAGCGACGGATCCTTTCTGTGGAACCCCCAAGATCTACCAAGAGGGTTGGAGGA
CTGTGTTTCACTGCAGATCCCAATGTGGTGGACCTCCACAAAATGGGGCCCCATTTCTACGGGTTTGGCTCCCAGC
TCCTGCATTTTGACAGTCCCGAGAATGCAGACATTTCCAGTCTCTGCTGCAGACTTTTATCGGACGTTTTCGCC
GCATCATGGACTCCTCACAGAATGCTTACAACGAAGACACTTCAGCCCTGGTAGCCAGGCTAGACGAGATGGAGA
GGGGCTTATTTCAAACAGGGCAGAAAGGACTGAATGACTTTTCACTGTTGGGAGAAGGGGCAGGCTTCTCAGATCA
CAGCTTCCAACCTCGTTCAGAATTACAAGAAGAGAAAATTTCACTGATATGGAAGACTGAAAGCCGGAAGAACACA
GAATGGCTCCTCACAGACGTATCCCTCCGTGTGCTTGTATAGGAGCTGGTTGACCTTGTACAGAACCAGAATCC
TGTCCCATTTTCACTGGCTTATTTCCGTGTGGCCATAGAGAATTATAGGGAAGTGGACATGCTGGAGGATGTGGGTGT
CCCTGGCTCTGTGAGTCTTCCAGGACCGTCCACCCCTGCTGACCCACAGCCAGGCCCTTTAACCCAAAGAACCCA
TGGCCAAGGAGAAATCAAAGTCCTTCCCTAAATAAGAATCACTGCCATATAATATATCACAGTAGAGTTGCAACTG
AGATTCCCTTGTGTCTGGGAGTTTGGACAGCTTCAGATGTACAGTTTCACTAGCCACAAAGCACAGGTACAACTG
GGTCATCGCCTGTTCAAAAATGCTCTCTTGATCTTATTTGCCTCATCTTCTCATGGTTGTACAGAGGATAGCA
CCCCACCATGCCAGCCTGACTTGGAGATATCTCCTGCTGCCTGCCTGCAGGGAGTTACCCAGTTTCCAAAAACA
GTCGCCCAGATAAAGGAGGAAAAGGGAAAGGCAGACGAATGGCATGGCTTTTACTAAAGAAAAGATGTTGGCCTC
ATACTCTATACTCAGGGCTTAATGAACCTGGAATCTGCATAACTCAGCAGTCAACCCAGAAGGGAAATGTTTAAAC
TGAGCTTGTTATTGCCTCGGAGAGCCTAAGAGCACCCGCACACTTAATTCTACTCCCTGTCTAGAAAAGCTGTCA
GGGAGTCGTTTGGAAATTGCAATGTAGTTATTAAGGGCTGTTAACCAGCCTGCATTACATCTGGAAGTCAGGACTT
GGGTGCTGACTATGAAGGGCCCTGTTTTCAAATCTAACATTGCAAGTGTAATGGGCAAGAAGCCTCCGTTGTG
CTTTTTTTTTTCTCTTCAGTAACTTTGTCAACATTATTGCATAGAAGATCCCTGACCATTTACTAGGAACCTGGT
TAAGCAAGCACTAATCTCTTTTCTGGAGATCAAGGATGCAACCTCAGGTTGAGAAAGAAACAGGGTTCCCTGGG
CCCATAGACTGTTTGCAGGGCATCACTGCTTCCCCCTGACACCTCACAACTAGCAAAAATTGTCTTTGTCTTTG
GAAATTATAGAGGGATTGGGTATCCAGATTGTGCAGATGCAAACTTAGGCTGTCTTGATGCAAACTTAGAACCA
CAGAAATGCTTTTAAATGCCTGTTTTAAGATGGAATTGTTGTTTTTATAATTTGATTTTAGTGCTAAATAAATG
ATTGGCTTTGTACATGAATATGTTCTGTACAAGTGCTTTTCACTAGTACTACAGATAATCAAAGCTATCAGAAT
TGTGTCTTTGATCATATTTGACGGTAATACACAAATAAATCCATGTTTTAGCAAAAAAAAAAAAAAAAAAAAAA
A

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FIGURE 1014

MSEAYFRVESGALGPEENFLSLDDILMSHEKLPVRTETAMPRLGAFFLERSAGAETDNAVPOGSKLELPLWLAKG
LFDNKRILSVELPKIYQEGWRTVFSADPNVVDLHKMGPHFYGFSGQLLHFDSPENADISQSLQTFIGRFRRIM
DSSQNAYNEDTSALVARLDEMERGLFQTGQKGLNDFQCWEKGQASQITASNLVQNYKKRKFTDMED

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FIGURE 1015

GGCACGAGGGGCACCGCAGGAGCAACGGTTGGTCCTGCGGCTGTGATGTCGGTGTGAGGCCCTGGACAAGCTGC
CCGGCCTGAACACGGCCACCATCTTGCTGGTGGGCACGGAGGATGCTCTTCTGCAGCAGCTGGCGGACTCGATGC
TCAAAGAGGACTGCGCCTCCGAGCTGAAGGTCCACTTGGCAAAGTCCCTCCCTTTGCCCTCCAGTGTGAATCGGC
CCCGAATTGACCTGATCGTGTTTGTGGTTAATCTTCACAGCAAATACAGTCTCCAGAACACAGAGGAGTCCCTGC
GCCATGTGGATGCCAGCTTCTTCTTGGGGAAGGTGTGTTTCCCTCGCCACAGGTGCTGGGCGGGAGAGCCACTGCA
GCATTCACCGGCACACCGTGGTGAAGCTGGCCCACACCTATCAAAGCCCCCTGCTCTACTGTGACCTGGAGGTGG
AAGGCTTTAGGGCCACCATGGCGCAGCGCCTGGTGC GCTGCTGCAGATCTGTGCTGGCCACGTGCCCGGTGTCT
CAGCTCTGAACCTGCTGTCCCTGCTGAGAAGCTCTGAGGGCCCCCTCCCTGGAGGACCTGTGAGGGTGGCTGGCCC
CTGGGCTGCCCCTTCTCAIGGCTTCGTGCTGACTCCATAAACATTCTCTGTTGAGGATGTCCAGTCAGGGCTTGA
CAGGCCCAGGCTCAGCCCGCCGTGGCTGGGAAGGTTCCCTGCAGTGCCAGTGCTGCAGCAGGGAGAGCTGGGCAG
AAGCAGCGAGGGGGCCCAGCTGGCGAGACTGTAGCCCCCTCCCACTCCACACTCACTCTTGCAGAGCCTGTGTC
TTTAAGCAGCTGGCGTGTACATCTCCATTTAAGGTTTCCTTTGAACAAAAGGTCTGTGGCTAAAAAAGTTTAA
AAATCAAAAAAAAAAAAAAAAAA

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FIGURE 1016

MSVLRPLDKLPGLNTATILLVGTE DAL LQQLAD SMLKEDCASELKVHLAKSLPLPSSVNRPRIDLIVFVNLHSK
YSLQNT EESLRHVDASFFLGKVCFLATGAGRESHCSIHRHTVVKLAHTYQSPLLYCDLEVEGFRATMAQRLVRVL
QICAGHVPGVSA LNLLSLLRSSEGPSLEDL

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FIGURE 1017

GGGAGTAGGAGGTGTGACCGGAGGGCGAAATTGGGGCTTCCTCTGCTCTGGTGACCCAGAACCGTCAACTGAAAT
GACCCTGTCTGTGTAGTACTCCGGCAGGATGGGCCTCGGAGCGTAAAGGCGGCAAAAACAAAAATATTAAAAAA
AGGAGAGAGGGACAAAAAAGAAAAACCCGAAAGTTTCAGCTGCATTGCTGCGGAACGTTTTTTAGCCAGAAGGC
GAAAGAAGAAATCGGAAGTGACGTGCGCGGCCAAAACAAGCCCGGGCTTGGAGGCCTGTACTGAAAGCTGGCCTCAG
ATGGGAAGGCCCCGACTCGCTGTCTGCTGTCTGCTCGGTGGTTCGCGAGACCTTGCACTCTCACCGGGTCGGCCTCCAG
CCCCTGTGCCCCGGGATCCGCTCGCCGCGGATGAGCGAGAGTTTTCTTCCTGGGACTTTTTCGGGCACAGCTGGCCGG
TGGCGACAGAACGGACTTTCTTTCTGCAAGAGTCTCCCTCCAGCGGGAGACAGCGGGCTCCTGTCTCGGGACG
CTGGGACACCTGTCTGCTATTTTTTAAATATCCAGATTCCAAGAACACACTGGATACTGCTCTTACAAAACCAAGA
GGAAATCATGAAGAAATGTTTTAGTTATTGAACTACAGTTGAAATCATGGATAACATCAACAAATCTGGATATTG
GAGCCCAGCTTATCGTGGAAGAGTGTCCCAGCACTTATAGCCTAACTGGCATGCCAGACATTAAAAATAGAACATC
CACTGGACCCAAATTCAGAAGAAGGGTCAGCTCAGGGTGTGGCCATGGGAATGAAATTCATATTGCCTAACCGAT
TTGATATGAATGTGTGTTCTCGATTGTGAAGTCCTTAAATGAAGAAGATAGTAAAAATATTCAAGATCAGGTTA
ACTCTGACCTGGAGGTGGCATCTGTCTTATTTAAAGCTGAATGCAATATCCATACATCTCCTTCTCCGGGAATTC
AAGTAAGGCATGTCTACACCCCTCTACAACAAAGCATTCTCACCCATAAAACAGTCAACCACTTTAACCAACA
AACACAGAGGAAATGAGGTCTCTACCACACCTCTGTTAGCAAATCTTTGTCTGTTACCAGTTGGCTGCTCAGG
GAGAGATGCTCTATCTGGCTACTCGTATCGAACAAGAAATGTTATCAATCACACGGATGAAGAAGGATTTACTC
CTCTGATGTGGGCTGCAGCACACGGGCAAATAGCTGTGGTAGAGTTCCTACTTCAGAATGGTGCTGATCCCCAAC
TTTTAGGAAAAGGTGAGAAAGTGCACGTGCTGTTGGCCTGTAGTAAAGGCTACACAGATATTGTCAAAATGCTGC
TTGATTGTGGAGTTGATGTAAATGAATATGATTGGAATGGAGGAACACCTCTGCTTTATGCTGTACATGGAAATC
ATGTGAAATGTGTAAAGATGCTCTTAGAAAGTGGGGCTGATCCAACAATTGAACTGACTCTGGATATAATTCTA
TGGATCTAGCTGTAGCCCTAGGCTATAGAAGTGTTCAACAGGTTATTGAGTCACATTTGTTGAAGCTGCTTCAA
ATATCAAGGAGTAGACACAGTCATCAGAAAATGTCTGCCCTTTTGTCTTACTTCTTGGTCCCTATAAAATGATAGTT
TTGTTTACTTATAAAATTTTACCTCAGTTGCAATATTTACTGGTTTTTAGTAGGTTTTAATAAAATATTCTCTGA
GTAATTCAGTGGTTTATAATAAATGTAATACTCTTTTATAACTATGTTTTACTGTATATTTAAAAATTATAAATT
AATGTTTTCGTGGCATGTAAATTTTATGGTACAGATAGTTATCATCAGTCITTTGTATCAAGTGCTGTAAATTTGA
CATTTTCAGAAATTATTCTACCCTAGTCATCTTCACTCGTGTATTAAGTCATTCACCTTTATATAGGGTTTGCTAT
AAATCCCTAGAAAAAAATTGTTCTTATTGTTGAATTAAAAAGTGCACAGTGTGATTGTTTACAAAATGATATTAT
AAATAAATAAAATACTTCTTCTG

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FIGURE 1018

MDTSTNLDIGAQLIVEECPSTYSLTGMPDIKIEHPLDPNSEEGSAQGVAMGMKFILPNRFDNMVCSRFBVKSLENEE
DSKNIQDQVNSDLEVASVLFKAECNIHTSPSPGIQVRHVYTPSTTKHFSPIKQSTTLTNKHRGNEVSTTPLLANS
LSVHQLAAQGEMLYLATRIEQENVINHTDEEGFTPLMWAAAHGQIAVVEFLLQNGADPQLLGKGRESALSLACSK
GYTDIVKMLLDGVDVNEYDWNGGTPLLYAVHGNHVKCVKMLESADPTIETDSGYNSMDLAVALGYRSVQQVI
ESHLLKLLQNIKE

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FIGURE 1019A

ATCCTTGCCGCCCGCCCCGGCCCCAGCCGCGTCCCGGAGCCGTCGGGCAATGGAGCCGTGGAAGCAGTGCGCGCAGT
GGCTCATCCATTGCAAGGTGCTGCCCACCAACCACCGGTGACCTGGGACTCGGCTCAGGTGTTGACCTTGCGC
AGACCCTCCGCGATGGAGTCCTGCTCTGCCAGCTGCTTAACAACCTCCGGGCGCACTCCATCAACCTGAAGGAGA
TCAACCTGAGGCCGCGAGATGTCCAGTTTCTCTGTTTGAAGAACATAAGGACATTTCTCACGGCCTGTTGTGAGA
CGTTTGGAATGAGGAAAAGTGAACTTTTGAGGCATTTGACTTGTTTGATGTTTCGTGACTTTGGAAAGGTTATAG
AAACATTATCACGACTTTCTCGAACACCTATAGCATTGGCCACAGGAATCAGGCCCTTCCCAACAGAAGAAAAGCA
TTAATGATGAAGACATCTACAAAGGCCTTCTGATTTAATAGATGAAACCCCTTGTTGGAAGATGAAGAAGATCTCT
ATGACTGTGTTTATGGGGAAGATGAAGGTGGAGAAGTCTATGAGGACTTAATGAAGGCAGAGGAAGCACATCAGC
CCAAATGTCCAGAAAATGATATACGAAGTTGTTGTCTAGCAGAAATTAAGCAGACAGAAGAAAAATATACAGAAA
CTTTGGAGTCAATAGAAAAGTATTTTCATGGCACCCTAATAAGATTTCTGACAGCAGCAGAATTTGATTTCAGTAT
TCATCAACATTCTGAACCTTGTAACCTTCATCGGAACCTAATGCAAGAGATTCATGATTCCATTGTAAATAAAA
ATGACCAGAACCTGTACCAAGTTTTTATTAATACTACAAGGAAAGATTGGTTATTTACGGGCAGTACTGCAGTGGAG
TGGAGTCAGCCATCTCTAGTTTAGACTACATTTCTAAGTCAAAAGAAGATGTCAAACCTGAAATTAGAGGAATGTT
CCAAAAGAGCAAATAATGGGAAATTTACTCTTCGAGACTTGCTTGTTGTTCCCTATGCAACGTGTTTTAAAGTACC
ACCTTCTCCTCCAGGAACCTGGTCAAACATACCCTGATCCGACTGAGAAGGCAAATCTGAAACTGGCTCTTGATG
CCATGAAGGACTTGGCACAATATGTGAATGAAGTGAAAAGAGATAATGAGACCCTTCGTGAAATTAAACAGTTTC
AGCTATCTATAGAGAATTTGAACCAACCAGTTTGTCTTTTGGACGACCTCAGGGAGATGGTGAAATTCGAATAA
CCACTCTAGACAAGCATAACCAACAAGAAAGGCATATCTTCTTATTTGATTGTCAGTGATCGTATGTAAGAGAA
AAGGTGATAACTATGAAATGAAGGAAATAATAGATCTTCAGCAGTACAAGATAGCCAATAATCTACAACCGATA
AAGAAAACAAAAGTGGTCTTATGGCTTCTACCTCATCCATACCCAAGGACAAAATGGGTTAGAATTTTATTGCA
AAACAAAAGATTTAAAGAAGAAATGGCTAGAACAGTTTGAAATGGCTTTGTCTAACATAAGACCAGACTATGCAG
ACTCCAATTTCCACGACTTCAAGATGCATACCTTCACTCGAGTCACATCCTGCAAAGTCTGCCAGATGCTCCTGA
GGGGAACATTTTATCAAGGCTATTTATGTTTTAAGTGTGGAGCGAGAGCACACAAAGAATGTTTGGGAAGAGTAG
ACAATTGTGGCAGAGTTAATCTGGTGAACAAGGGGACACTCAAACCTACCAGAGAAACGGACCAATGGACTGCGAA
GAACCTCTAAACAGGTGGATCCAGGTTTACCAAAGATGCAGGTCAATTAGGAACCTATTCTGGAACACCACCCCCAG
CTCTGCATGAAGGACCCCTTTACAGCTCCAGGCCGGGGATACCGTTGAACCTTCTGAAAGGAGATGCACACAGTC
TGTTTTGGCAGGGCAGAAATTTAGCATCTGGAGAGGTTGGATTTTTTCCAAGTGATGCAGTCAAGCCTTGCCCAT
GTGTGCCCAAACAGTAGATTATTCTTGCCAACCTGGTATGCTGGAGCAATGGAAAGATTGCAAGCAGAGACCG
AACTTATTAATAGGGTAAATAGTACTTACCTTGTGAGGCACAGGACCAAAGAGTCAGGAGAATATGCAATTAGCA
TTAAGTACAATAATGAAGCAAAGCACATCAAGATTTTAACAAGAGATGGCTTTTTTTCATTGTCAGAAAATAGAA
AATTTAAAGTTTAAATGGAACCTGTGGAGTACTACAAGCATCATTCTCTCAAGGAAGGGTTTCAAGACCTTAGATA
CAACTCTGCAGTTTCCATACAAGGAGCCAGAACATTCAGCTGGACAGAGGGGTAATAGAGCAGGCAACAGCTTGT
TAAGTCCAAAAGTGCTGGGCATTGCCATCGCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTGT
TGAAAGGAGATGTGGTGAAGATTTACACAAAGATGAGTGCAAATGGCTGGTGGAGAGGAGAAGTAAATGGCAGGG
TGGGCTGGTTTTCCATCCACATATGTGGAAGAGGATGAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAAAT
TTCAGAGAAGGGATAAATAGAAGCCTGCACAGCATCGTGAATTAAGTGAAGTGTTTAAAAAGCTGCATTTCTGGC
TGTTCAACATCCTCCCTCCTTAGCCCCCTCCTAAGTCTTAATGCTGAGATTTCTAAAGATGCTGGTACTGACAGAT
TAATGGCTTGCTTAGAGCTGTGCAAGAAACAGCCTGCCAGTCTGTCAATTGTCAGGGACCAGGGCAAAACCAAGAG
CTGTTCTTCCCAGAAGAGCCCTGCAAACACATTGGTTCGTGCTTCCCTTTACTTCTTCTGGTCAGATACCATGAA
TGCCAGTCATCAGTAAATCTTAATACACTTTTGCTTTATTTCTCATATGCCATTACCAGATTATTTGATGGTACA
AAGAAGCAGAAGTGTAATTTTCTTTTCCAGCATGACGAAAAATTGGAGTTCTGCCATTGAGCAGCTTACTGG
AAAGATCCAGCCTTACTTGTCTTAAATTGTCCAACAAGGTGACTCATTGCCCGGCAAACACTTTTACCCTCAGAT
GTTACTCATGATATTATAAAATATGAGGCCAGTGCTCAGGTTTGATCATAAGTGAGCTATCCCTGAAGGGTTTT
AATTACTTATTTGGTGTCTGATTATATTGCAAACCTTCTTTATAAAAGGTGAAAAAGCACACAAAAGAGAGGG
TGTCTTCATATTAAACCTTCACAACCTTCATGATTTTCATAGGATTATTTTGGAAATATAGCACTTGACTTTATGA
AAGGATCTGGGCTAGGTATATTAGGGGTAGTTGCCAATAACCTGAAGAAGCTGGCATTGTTTACAGAAACAGATC
AAGGGCTATAATTTATGTCATTTTATAGCAGCAGTATCTATTAATACATGCCTTTTCTCCCATCCACCTCCCC
GCACACACACAAAGATGACCTGGGACATGATTTTTTTATTCCACATTTTCTTGAGCACAAACACTTGTGTA

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FIGURE 1019B

GGATTTTGAAGGAAAGCACAACTGGGTCCCTTTATTCATTTCTGGGACAGAAAGAGGGTCAGTGGACTTTTGTGG
GCCTCCAGCTTCTCTCAGAGTCTCCCCCTCTGCAGCCCATCCTGGGAGTGTATTAACTGGAGGGAAGATGGGTCT
TGCAGTACATTTGTTTTGCCAGCCATCACTCTTTTTTGTGAGGAGCCTAAATACATTCTTCCTGGGGTCCAGAG
TCCCCATTCAAGGCAGTCAAGTTAAGACACTAACTTGGCCCTTTCCTGATGGAAATATTTCCCTCCATAGCAGAAG
TTGTGTTCTGACAAGACTGAGAGAGTTACATGTTGGGAAAAAAGAAGCATTAACTTAGTAGAACTGAACCAGG
AGCATTAAAGTTCTGAAATTTTGAATCATCTCTGAAATGAAGCAGGTGTAGCCTGCCCTCTCATCAATCCGTCTGG
GTGCCAGAACTCAAGGTTCAGTGGACACATCCCCCTGTTAGAGACCCTCATGGGCTAGGACTTTTCATCTAGGAT
AGATTCAAGACCTTTACCTCAGAATTATGTAACTGTGATTGTGTTTTAGAAAAATTATTATTTGCTAAAACCAT
TTAAGTCTTTGTATATGTGTAAATGATCACAAAAATGTATTTTATAAAATGTTCTGTACAATAAAGTTACACCTC
AAAGTGTA CTCTTGAATGGATTCTTTCCTGTAAAGTCTTATCTGCGACTCTGTCTCGGGAATGTTTTGTCTGTT
GCCGTCAGCCGAACCTTTGTTATGGAGGGAGCAGCCTCACACAAGCAGAAACACTCCTGTGGATGGTATTGTAGCA
TGTATTGTTTTATTTTAGTCAATAGACCCTCTCCTTATAAATGGTGTTTAGTCTTCCTGTTGCATTTTCATGGGCCT
GGGGGTTTTCTAGCAGAGGATATTGGAGCCCCTTTTTGTGACATTACCAATTACATCTTTGTCCACGTTTAATAC
TTTGTGTTTTGAAAAATTTAAATGCTGCAGATTTGTGTAGAGTTCTAATACCAAAGACAGAAAGTAAATGTTTTCCAT
ATACTTTGTCTTGCCGTGTATGCAGCCCTTGTGTAATATGGTGAATTAGAGTGGTATTTCACTTTGTATTATTTTG
TAAATATGTCAATATAATAAATAGTGACTAAAAAAAAAAAAA

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FIGURE 1020

MEPWKQCAQWLIHCKVLPTNHRVTWDSAQVFDLAQTLRDGVLLCQLLNNLRAHSINLKEINLRPQMSQFLCLKNI
RTFLTACCETFGMRKSELF EAFDLFDVRDFGKVIETLSRLSRTPIALATGIRPFPTEESINDEDIYKGLPDLIDE
TLVEDEEDLYDCVYGEDEGGEVYEDLMKAEAAHQPKCPENDIRSCCLAEIKQTEEKYTETLESIEKYFMAPLKRF
LTAAEFDSVFINIPELVKLHRNLMQEIHDSIVNKNDONLYQVFINYKERLVIYGQYCSGVESAISSLDYISKSKE
DVKLKLEEC SKRANNGKFTLRDLLVPMQORVLKYHLLQELVKHTTDPTEKANLKLALDAMKDLAQYVNEVKRDN
ETLREIKQFQLSIENLNQPVLLFGRPQGDGEIRITTLDKHTKQERHIFLFDLAVIVCKRKGDNYEMKEIIDLQQY
KIANNPTTDKENKKWSYGFYLIHTQGQNGLEFYCKTKDLKKKWLEQFEMALSNIRPDYADSNFHDFKMHTFTRVT
SCKVCQMLLRGTIFYQGYLCFKCGARAHKECLGRVDNCGRVNSGEQGTLLKLPKRTNGLRRTPKQVDPGLPKMQVI
RNYSGTPPPALHEGPPLQLQAGDTVELLKGDHSLFWQGRNLASGEVGFPSDAVKPCPCVPEKPDYSCQPWYAG
AMERLQAETELINRVNSTYLVRHRTKESGEYAISIKYNNEAKHIKILTRDGFFHIAENRKFKSLMELVEYYKHHS
LKEGFRTLDTTLQFPYKEPEHSAGQQRGNRAGNSLLSPKVLGIAIARYDFCARDMRELSLLKGDVVKIYTKMSANG
WWRGEVNGRVGWFPSTYVEEDE

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FIGURE 1021

[illegible]

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FIGURE 1022

MKTS DIKELNIVLPEFEKTHLEHQQRIESKVCKAAIATFYVNVKEQFIKMLKESQMLTNLKRKNAKMISDIEKKR
QRMIEVQDELLRLEPQLKQLQTKYDELKERKSSLRNAAYFLSNLKQLYQDYSQVQAQEPNVKETYDSSSLPALLF
KARTLLGAESHLRNINHQLKLLDQG

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FIGURE 1023

ATGTGGGGGCGCACGGCGCGGGCGGCGCTGCCCCGCGGAACTGCGGCGCGGCCGGGAGGCGCTGTTGGTGCTCCTG
GCGCTACTGGCGTTGGCCGGGCTGGGCTCGGTGCTGCGGGCGCAGCGTGGGGCCGGGGCCGGGGCTGCCGAGCCG
GGACCCCCGCGCACCCCGCGCCCCGGGCGGCGCGAGCCGGTCATGCCGCGGCCGCGGTGCCGGCGAACGCGCTG
GGCGCGCGGGGCGAGGCGGTGCGGCTGCAGCTGCAGGGCGAGGAGCTGCGGCTGCAGGAGGAGAGCGTGCGGCTG
CACCAGATTAACATCTACCTCAGCGACCGCATCTCACTGCACCGCCGCTGCCCGTGCGCTGGAACCCGCTGTGC
AAAGAGAAGAAATATGATTATGATAATTTGCCAGGACATCTGTTATCATAGCATTTTATAATGAAGCCTGGTCA
ACTCTCCTTCGGACAGTTTACAGTGTCTTGAGACATCCCCGGATATCCTGCTAGAAGAAGTGATCCTTGTAGAT
GACTACAGTGATAGAGAGCACCTGAAGGAGCGCTTGGCCAAAGAGCTTTCGGGACTGCCCAAGGTGCGCCTGATC
CGCGCCAACAAGAGAGAGGGCCTGGTGCGAGCCCGGTGCTGGGGGCGTCTGCGGCGAGGGGCGATGTTCTGACC
TTCTTGGACTGTCACTGTGAGTGCCACGAAGGGTGGCTGGAGCCGCTGCTGCAGAGGATCCATGAAGAGGAGTCG
GCAGTGGTGTGCCCCGGTGATTGATGTGATCGACTGGAACACCTTCGAATACCTGGGGAACCTCCGGGGAGCCCCAG
ATCGGCGGTTTTCGACTGGAGGCTGGTGTTCACGTGGCACACAGTTCTTGAGAGGGAGAGGATACGGATGCAATCC
CCCGTCGATGTCATCAGGTCTCCAACAATGGCTGGTGGGCTGTTTGCTGTGAGTAAGAAATATTTTGAATATCTG
GGGTCTTATGATACAGGAATGGAAGTTTGGGGAGGAGAAAACCTCGAATTTTCCCTTAGGATCTGGCAGTGTGGT
GGGGTTCTGAAACACACCCATGTTCCCATGTTGGCCATGTTTTCCCAAGCAAGCTCCCTACTCCCGCAACAAG
GCTCTGGCCAACAGTGTTTCGTGAGCTGAAGTATGGATGGATGAATTTAAAGAGCTCTACTACCATCGCAACCCC
CGTGCCCGCTTGGAACCTTTTGGGGATGTGACAGAGAGGAAGCAGCTCCGGGACAAGCTCCAGTGTAAGACTTC
AAGTGGTTCTTGGAGACTGTGTATCCAGAACTGCATGTGCCTGAGGACAGGCCTGGCTTCTTCGGGATGCTCCAG
AACAAAGGACTAACAGACTACTGCTTTGACTATAACCCTCCCGATGAAAACCAGATTGTGGGACACCAGGTCATT
CTGTACCTCTGTATGGGATGGGCCAGAATCAGTTTTTCGAGTACACGTCCAGAAAGAAATACGCTATAACACC
CACCAGCCTGAGGGCTGCATTGCTGTGGAAGCAGGAATGGATACCCTTATCATGCATCTCTGCGAAGAACTGCC
CCAGAGAATCAGAAGTTCATCTTGCAAGGAGGATGGATCTTTATTTACGAACAGTCCAAGAAATGTGTCCAGGCT
GCGAGGAAGGAGTCGAGTGACAGTTTCGTTCCACTCTTACGAGACTGCACCAACTCGGATCATCAGAAATGGTTC
TTCAAAGAGCGCATGTTATTGA

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FIGURE 1024

MWGRTARRRCPRELRRGREALLVLLALLALAGLGSVLRAQRGAGAGAAEPGPPRTFPRPGRREFVMPRPPVPANAL
GARGEAVRLQLQGEELRLQEE SVRLHQINIYLSDRISLHRRLPVRWNPLCKEKKYDYNLPRTSVIIAFYNEAWS
TLLRTVYSVLETS PDILLEEVILVDDYSDREHLKERLANELSGLPKVRLIRANKREGLVRARLLGASAARGDVL
FLDCHCECHEGWLEPLLQRIHEEESAVVCPVIDVIDWNTFEYLGNSGEPQIGGFDWRLVFTWHTVPERERIRMQS
PVDVIRSPTMAGGLFAVSKKYFEYLGSYDTGMEVWGGENLEFSFRIWQCGGVLETHPCSHVGHVFPKQAPYSRNK
ALANSVRAAEVWMDEFKELYHRNPRARLEPFGDVTERKQLRDKLQCKDFKWFL ETVYPELHVPEDRPGFFGMLQ
NKGLTDYCFDYNPPDENQIVGHQVILYLCHGMGQNQFFEYTSQKEIRYNTHQPEGCIAVEAGMDTLIMHLCEETA
PENQKFI LQEDGSLFHEQSKKCVQAARKESSDSFVPLLRDCTNSDHQKWFFKERML

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FIGURE 1025

AATTATATATTTTTACTCTATGTTTCTCTACATGTTTTTTTCTTTCCGTTGCTGGCGGAAGAGGCACGTGCGCTG
CTGAATGGAGCTGGTCGCTGGTTGCTACGAGCAGGTCCTCTTTGGGTTGCTGTACACCCGGAGCCCAAGGCTTG
CGGCGACCACGAGCAATGGACTCTTGTGGCTGACTTCACTCACCATGCTCACAATGCCTCCTTGTGAGCAGTAGC
TGTAATAGTCGTTTTTGTGGTCACTGGGAGCAAAGATGAAACAATTCACATTTATGACATGAAAAAGAAGATTGA
GCATGGGGCTCTAGTGCATCAGTGGTACAATAACTTGCCTGAAATTCTATGGCAACAGGCATTTAATCAGTGG
AGCGGAAGATGGACTCATCTGTATCTGGGATGCAAAGAAATGGGAATGCCTGAAGTCAATTAAAGCTCACAAAGG
ACAGGTGACCTTCCTTTCTATTACCCATCTGGCAAGTTGGCCCTGTCGGTTGGTACAGATAAAACTTTAAGAAC
GTGGAATCTTGTAGAAGGAAGATCAGCATTCTATAAAAAATATAAAACAAAATGCTCACATAGTAGAATGGTCCCC
AAGAGGAGAGCAGTATGTAGTTATCATAACAGAAATAAATAGACATCTATCAGCTTGACACTGCATCCATTAGTGG
CACCATCACAAATGAAAAGAGAATTTCCCTCTGTTAAATTTCTTTTCAGAGTCTGTCCCTGTCAGTGGCTGGAGATGA
AGAAGTTATAAGGTTTTTTGACTGTGATTCACTAGTGTGCCTCTGCGAATTTAAAGCTCATGAAAACAGGGTAAA
GGACATGTTTCAGTTTTTGAAATTCCAGAGCATCATGTTATTGTTTCAGCATCGAGTGATGGTTTCATCAAAATGTG
GAAGCTTAAGCAGGATAAGAAAGTTCCCCATCTTTACTCTGTGAAATAAACACTAATGCCAGGCTGACGTGTCT
TGGAGTGTGGCTAGACAAAGTGGCAGACATGAAAGCCTTCCTCCAGCTGCAGAGCCTTCTCCTGTAAGTAAAGA
ACAGTCCAAAATTGGCAAAAAGGAGCCTGGTGACACAGTGCACAAAGAAGAAAAGCGGTCAAAACCTAACACAAA
GAAACGCGGTTTAACAGGTGACAGTAAGAAAGCAACAAAAGAAAGTGGCCTGATATCAACCAAGAAGAGGAAAAAT
GGTAGAAATGTTGGAAAAGAAGAGGAAAAAGAAGAAAATAAAAACAATGCAGTGAATCACAGATGTCTCCTGAAA
GAACTCTTTTAGATGAAATCATTCTACTCAAATGTACCTTAATTTTTTTTTTCCCTGAGTAAAAGCAAGAAATT
TCTTCCTTTGGAAAAATATATATATATAAAAAACCACTTTTAGATGGTTTTTTTTTAAAAAATAAAAAAACTGG
TAAATTACTTTTGGCAGACAGTGTATGAATTATGTATCATGTTGATATATAATATGTTAATGTGTCATGTA
ATTTTTACTTTGTACAAAGCAAATAAAGATCTTCTCAAAAAAAAAAAAAAAAAA

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FIGURE 1026

MELVAGCYEQVLFQFAVHPEPKACGDHEQWTLVADFTHHAHTASLSAVAVNSRFVVTGSKDETIHIYDMKKKIEH
GALVHHSGTITCLKFYGNRHLSGAEDGLICIWDAKKWECLKSIKAHKGQVTFLSIHPSGKLALSVGTDKTLRTW
NLVEGRSAFIKNIKQNAHIVEWSPRGEQYVVIIQNKIDYQLDTASISGTITNEKRISSVKFLSESVLAVAGDEE
VIRFFDCDSLVLCLCEFKAHENRVKDMFSFEIPEHHVIVSASSDGFIMWKLKQDKKVPPSLCEINTNARLTCLG
VWLDKVADMKSLPPAAEPSVPSKEQSKIGKKEPGDTVHKEEKRSKPNTKKRGLTGDSKKATKESGLISTKKRKMV
EMLEKKRKKKKIKTMQ

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FIGURE 1027

AAACCCAAAGCGGCCGCCGTAGGCGAAGGTGAAGATGGCTGCCTCTGCCTTTGCTGGTGCAGTGAGAGCAGCTTC
AGGAATCCTACGGCCCCCTGAATATTTTGGCATCTTCAACCTACCGCAACTGTGTCAAGAATGCCTCTCTTATTTT
TGCAATTGTCCACTGGACGTTTTAGTCATATTCAGACACCAGTTGTTTTCTCCACTCCCAGACTTACCACATCTGA
GAGAAACCTGACATGTGGGCATACCTCAGTGATCCTTAATAGAATGGCCCCCGTGCTTCCAAGTGTCTGAAGCT
GCCAGTCAGATCTCTAACATACTTCAGTGCAAGAAAAGGCAAGAGAAAGACCGTGAAAGCTGTCTCGATAGGTT
TCTTCGACTTCATTGTGGCCTTTGGGTGAGGAGAAAGGCTGGCTATAAGAAAAAATTATGGAAAAAGACACCTGC
AAGGAAGAAGCGATTGAGGGAATTTGTATTCTGCAATAAAACCCAGAGTAAACTCTTAGATAAAAATGACGACGTC
CTTCTGGAAGAGGCGAAACTGGTACGTTGATGATCCTTATCAGAAGTATCATGATCGAACAAACCTGAAAGTATA
GATCAGAAGTTTTCACTTGTTTCTCAGTTATTGGATATGTATCTTTGTGTACATATCTTTGCAAAAATGGATAAGT
ACAAAACCTTGATGTAAATTGTACCAATGAATACGTAAACATACAGTGACAACATTAAACTTAGAAAAAGTTTTAAA
ACTTAATGGATCAGACTTTGCCAGATTTGGTTAGGGAAACAGAAATTTAGAATGGTGCATTATTTTTAACAAATG
GTATTGGCTTAACTAGTTGTTTCACTTATGCTCTTTTAGTTGCAAGGAATCTCAAGTGGGACAAACATAAAAAGA
CTCAAAAGCTACAAGTTAGCTCAAGCAATGTGACATTATTTCAAGGATATGTGCCAGGGAATTCAGGAACCACT
CACCAACCCCATCTCCCACTCAGAAATCACCTCCCAGCCTCAGGAAGAGTAGAAATTGGGTGGTGCCTCCTCAGCA
GGGGAAGGTGGATGTTTAGGCTTGGGCTCTGCATGCATGTGACTTGCTTCTTTTTGCATTGTTAACTCCATTCTC
TCTATTACCAACTTCTCTACACAGCTTTTGCACTTACAGTTTCTGTTTCTTTGTAATAACTTTAACTTGCAC
CTTTGAGGTTCTTTTCTACATGATGACCTTCAGCTCCTGCTGCTAGTCTCCAATTGCCAAGGGAATTTAACTGGG
CCAGACTACCTTTTTTATACTAGGTCTGGTTGGGTCACTGTCTAGAGTAGGGATTGGCTGTCTTAACTCAGGAGC
CCGCTTTGTATTAGCAGGTTTGCATGCAGCAAAAAACAGTTATGTGAGCAGTTTCACTTGGAGGTTACATGGG
GTGGCAGCACACTTAACATCTAACACACCAGGTTTCACTTGTGTTTATAACACTTGTCAATTTACTGTAACAACATTT
TTTCATAGGAGAGTAAATAGCCCTTCAGCATGCTCATTTCATGAAACAGAAGAGGCTGTACAAGTGAAGACAAGGG
CTTTTTATGCAAGTTTTGAAAGATAGGTATTTATTTTTTCTAGAGACAGGAGTTTTGCTCTGTTGCCAGGCTGG
AGTGCAGTGGTGCAATCATAGCTCATTGAAGCCTCGCACTCCGCGGCTCAAGTGGTCTCTGCTCAGCTTACT
GAGTAAGGATATGTATTTCTTAAAAAGTTAGTTTATCCACTTCAGATTTTCATGTTTTCACTTGTAAAGGATAAACTT
TTCCACAAATTTTCAACAATCATTGTAGAACTAAGGGGGAGAAAGTAATCTCAGTTGTTTTAGAAACGAAAAA
GTTAAGCATTGTTTACTTGAAGTGGGCAGGGAAGCAGCACTGAGTAAAGTTCAATTGAGTGGTTACAGTCTAGGG
CAGTGGTTCCCAACTCTCCGATCAGAATCATCTGGGAAGCATTTC AACAGCAAAGTACTTTGAAAACCAATTAT
TAAATAGAATTATGCATGAATTACTGTTTCAGATCCTTTAATGTGGTAGTTGGTAATAATAAGATGAAATTCCTC
TGTTGTTAGTAAATTTATGAAATTGAAGTTCTGCAGCATGTGAGGCCAGGATTATTAGGGAGATTCTCTGAAACT
AGTGTGTGTTTTATTAAAAGGAGAAAGGATAACAATAGAATGTTCTAAAACCAGAAGTCCAAGTGCCTGTCTACTT
ATGGGACCAATAAATAAAGAACAGACATTTGATTTGAGGTGAGGTAAAAGCCTGAAACATGGAATGGCATTCTGT
TTTGATGGATTTTCATTTCTTCGCACTTCTGAGACGGCAAAGCCAACCACTTAGAAGCCTTCCACATCTTTGTCA
CCTGCCTGGCTCCTGCTCTCTGATGTACCTCTGGGTAGTGAGATGGAATGGTGCCTGCAGAAGTTGGGGAGAAG
GATACTTTTGCACAGCCTCCATGATGTCTTTATTGCAAATATGGATGACAAGGGTCTCTGTTACAGGGGGCCTCAG
AGCACCTTCGTTTCTCCTCTAGACCAGGGACAGGTGTAGAGATAAGGACTGGCAACCAGAGCCTCAGCATCCAAA
GATGGACTGAAGTGGGATGGCTGACAGGCACATAACTTACGGGAAAGGGAATTTATACATACGATTTTTGTTTT
GTGGGTAGGAGGGCTTATCATCAACACTGATTTTATAATCTGACAATAAATGTCTTTTATTAAAGAGTTTACCTA
AATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1028

MAASAFAGAVRAASGILRPLNILASSTYRNCVKNASLISALSTGRFSHIQTPVVSSTPRLTTSEARNLTCGHTSVI
LNRMAPVLPSVLKLPVRSITYFSARKGKRKTVKAVIDREFLRHLHCGLWVRRKAGYKKKLWKKTPARKKRLREFVFC
NKTQSKLLDKMTTSFWKRRNWYVDDPYQKYHDRTNLKV

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FIGURE 1029

GGCGCCGGGGGACACGTTGGCTGCGTTTTTCGGCGGGCCTCCCGGGTACAAAAATGGCTGTGGCTAGCGATTTCTA
CCTGCGCTACTACGTAGGGCACAAAGGGCAAGTTTGGGCACGAGTTTCTGGAGTTCGAATTTTCGGCCGGACGGAAA
GCTTAGATATGCCAACACAGCAATTACAAAAATGATGTGATGATCAGAAAAGAGGCTTATGTGCACAAGAGTGT
AATGGAAGAACTGAAGAGAATTATTGATGACAGTGAAATTACAAAAGAAGATGATGCTTTGTGGCCTCCCCCTGA
TAGGGTTGGCCGACAGGAGCTTGAAATTGTAATTGGAGATGAGCACATATCTTTTACCACATCAAAAATAGGTTC
TCTTATTGATGTAAATCAGTCAAAGGATCCTGAAGGCCTTCGAGTATTTTACTATTTGGTACAAGACTTGAAATG
TTAGTTTTTCAGTCTTATTGGATTACACTTCAAGATTAAACCAATTTAAATTGTATGTTTTCAGGCTGTTTGTAT
ATTTAATTAAGGGATGGGAGGGGTTATTTGTCATTTACAGTATTGGGGTTTTTATGAATGTGAAGCAAACAAAA
AAATTTGTATGTAACTGAAAATAAGAAAATACATTAGCAAGCTTAATGGTTATCCTTACTTGAGTCCACATGGG
TTGGACAGTCCCCACACACATTAAATTCGTGTAATGAAAGCCACCTTTTGTAAAAAATTGCTCTAATAAAACAT
ACCAAATCCTGGTTCAGAGTAGTTTTTTGTTTTTTCAGGAGGCTATGTCTCTAATTCACTTTAGAGATAATAA
GAAATTGTTCTGGTAGATACATCCTGTGACAGAAGATACTTTAGGTGGAACATAGTAGCCAGATTCCCATCCATG
AAAGGCAAGTGTAGATTGTCCCTTATTTCCCTTCATACATGATTGGATTAAATTTTGGGGGGCTTATACAAGGTCT
AGTTTTTTTTTACAGTTATGACAAACCCCTCAGGGATTATTCACATTTAAATATTTTCAGTTACAAGCAGTGAGG
TCCTAAAGTGTTACAAGAGTACAGTCTACCCCATGTTAGGCATATCTTTGATTATGCTTTATTCCTTATTTTAC
AATGTATTTGGTGTGTAGGGGAGGGGGGAGAATAATGAGTTTTTCAGCTTTATAAATTGTTAAACATTTAGACA
AACATATATGTATGTATGAATGTACATAAATATTTTAACTCCTATTGACCACGAGTCTCACTTCAGTTTCCAG
TTCTTTTCAACCTCTTTCTGATAGATTTCCTCTTTCACTTCTTTTAGTAACCATGTTCTTGTTCCTTTTATTC
TTCCATCTGAAGCCCCACTCTTAAAAAGTTGCACTGTTCCAGTAGTTATAATCCACTTGCCCTAGGAACAAGTTA
GCACTGAATTTTTGGGTGGAATAATTAGTTTCTGAAGGCTTGCCAGGACCCCTGAGCAGGTAGGCTCTAGAGTCGG
GCAGTCCAATAACTTTTTTGAATAATGGAAACGTCCTATGTGCAGTCCAATAGGGTAGCAACTGGCCAAATGAG
GCCTACTGATTACTTGAGGTGTGCCTTGTATAACTGAATTTATGGTGCTATTTAAACAATTTTTTCTAACGTGA
AAAGGATAAAACATAAAAAACTCTTGAGAACTATAAAGTGAACACCTATATGCCTACCCCTACCTAGATTCTATA
CTTAACATCTTTTTTACTGTAATATCTCTATTATAATAAATCTTGGTTTTTCACTTAACTGGTGTAATTGGTGCC
AATAAACTACTTTTTTTGTAGTGCTATTTAATTTTGATTAAATTTAGATAGCCACGTGTCTAGCGGCTACCGTTT
GGACAGTATAGCTCTAGAGCATGGCTTGGTAACCTGTTTGCCATGGAGCACTAGATGGTCCTTTTCACTCCTCAA
AATGCATGCCCATTGCCTTCAGGTTTGCCATGGAAAGTCAAATGATTTCCACTTCATTATGCAAGTACGCTATCA
TCTTCAGGTCTTTTGTATGTAAATGTTTCTGTTCCAGTTGTAGACCTTGATGATTGTGCAGTATGAAATCGTAT
TGTAATTTTCTTGCAATTTAGATGTCAACCTCAGAAACAGGAACAATCGTCTTTTGAACCTCCAGTAGGCCCCACAG
TTGTTGGTTGTTTCTCAAACAGGTTGTGGCTCCTGTTGAATAAGATGATCCATTAATAAACTGAACAAGGTTGAG
GAGAAATAGTGCTTACGTTGAAAAATCTTTAAGTCTTTGTCCCCGTTCTCTAACTTCCTTACGTTTTTCGTTTATT
TAGCTCCATCCCCACTATCTACTAGAATTTCTCATATTTAAACCAAGATGGGAGACTAGGTCATTAGGAAAAATAT
TACCGTCTACAATTTTCTTATACTTTGATCTGTCTTTTATTTGATTGTAAGTTGCTGATGGACAGTGATCATTAG
AAACTGAATTTTGTATAATACTAGTTTTATATGAACTAGATATTTATTGCGCTCAGGTTATGTTCCCTTTTACCT
CCTTCCTTAATAAAGAGACCACTTGAAAT

1138/1629
FIGURE 1030

MAVASDFYLRYVVGHKGKFGHEFLEFEFRPDGKLRYANNSNYKNDVMIRKEAYVHKSVMEELKRIIDDSEITKED
DALWPPPDRVGRQELEIVIGDEHISFTTSKIGSLIDVNQSKDPEGLRVFYLVQDLKCLVFSLIGLHFKIKPI

1139/1629
FIGURE 1031

GTGCGCTGCGCACCTGGCTCAGGTGAGCTGCCCCGCCCCCGCCGGCGCGAGCCCCAGGTCTGGCAGCAGCC
CCTGACCTGTCCAGGTGCCCTGTCCAGCTGACTGCAAGGACAGAGAGGAGTCCTGCCAGCTCTTGATCAGTCT
GCTGGCCGAGGAGCCCGGTGGAGCCAGGGGTGACCCTGGAGCCAGCCTGCCCCGAGGAGGCCCGGCTCAGAGC
CATGCCAGGTGTCTGTGATAGGGCCCTGACTTCTCTCCCCGTCTGAAGACCAGGTGCTGAGGCCTGCCTTGGG
CAGCTCAGTGGCTCTGAAGTGCACGGCTTGGGTAGTCTCTGGGCCCCACTGCTCCCTGCCTTCAGTCCAGTGGCT
GAAAGACGGGCTTCCATTGGGAATTGGGGGCCACTACAGCCTCCACGAGTACTCCTGGGTCAAGGCCAACCTGTC
AGAGGTGCTTGTGTCCAGTGTCTGGGGGTCAACGTGACCAGCACTGAAGTCTATGGGGCCTTCACCTGCTCCAT
CCAGAACATCAGCTTCTCCTCCTTCACTCTTCAGAGAGCTGGCCCTACAAGCCACGTGGCTGCGGTGCTGGCCTC
CCTCCTGGTCTCTGCTGGCCCTGCTGCTGGCCGCCCTGCTCTATGTCAAGTGCCGTCTCAACGTGCTGCTCTGGTA
CCAGGACGCGTATGGGGAGGTGGAGATAAACGACGGGAAGCTCTACGACGCCTACGTCTCCTACAGCGACTGCCC
CGAGGACCGCAAGTTCGTGAACCTTCATCCTAAAGCCGACGTGGAGCGGCGTGGGGCTACAAGCTCTTCCTGGA
CGACCGCGACCTCCTGCCGCGCGCTGAGCCCTCCGCCGACCTCTTGGTGAACCTGAGCCGCTGCCGACGCCTCAT
CGTGGTGCTTTTCGACGCCTTCTGAGCCGGGCCTGGTGCAGCCACAGCTTCCGGGAGGGCCTGTGCCGGCTGCT
GGAGCTCACCCGCAGACCCATCTTCATCACCTTCGAGGGCCAGAGGCGCGACCCGCGCACCCGGCGCTCCGCCCT
GCTGCGCCAGCACCGCCACCTGGTGACCTTGCTGCTCTGGAGGCCCGGCTCCGTGACTCCTTCTCCGATTTTGTG
GAAAGAAGTGCAGCTGGCGCTGCCGCGGAAGGTGCGGTACAGGCCGGTGGAAGGAGACCCCGAGACGCAGCTGCA
GGACGACAAGGACCCCATGCTGATTCTTCGAGGCCGAGTCCCTGAGGGCCGGGCCCTGGACTCAGAGGTGGACCC
GGACCCTGAGGGCGACCTGGGTGTCCGGGGGCCTGTTTTGGAGAGCCATCAGCTCCACCGCACACCAGTGGGGT
CTCGCTGGGAGAGAGCCGGAGCAGCGAAGTGGACGTCTCGGATCTCGGCTCGCGAAACTACAGTGCCCGCACAGA
CTTCTACTGCCTGGTGTCCAAGGATGATATG**TAG**CTCCACCCAGAGTGCAGGATCATAGGGACAGCGGGGGCC
AGGGCAGCGGCGTCTGCTCCTCTGCTCAACAGGACCACAACCCCTGCCAGCAGCCCTGGGACCCTGCCAGCAGCCC
TGGGAAAAGGCTGTGGCCTCAGGGCGCCTCCAGTGCCAGAAAATAAAGTCCTTTTGGATTCTGAAAAAAAAAAAA
AA

1140/1629
FIGURE 1032

MPGVCDRAPDFLSPSEDQVLRPALGSSVALNCTAWVVSQPHCSLPSVQWLKDGLPLGIGGHYSLHEYSWVKANLS
EVLVSSVLGVNVTSTEVYGAFTCSIQNI SFSSFTLQRAGPTSHVAAVLASLLVLLALLLAALLYVKCRINVLWY
QDAYGEVEINDGKLYDAYVSYSDCPEDRK FVNFILKPQLERRRGYKFLDDRDL LPRAEPSADLLVNLSRCRRLI
VVLSDAFLSRAWCSHSFREGLCRLLELTRRPIFITFEGQRRDPAHPALRLLRQHRHLV TLLLWRPGSVTPSSDFW
KEVQLALPRKVRYRPVEGDPQTQLQDDKDPM LILRGRVPEGRALDSEVDPDPEGDLGVRGPVFGEPSAPPHTSGV
SLGESRSSEVDVSDLGSRNYSARTDFYCLVSKDDM

1141/1629
FIGURE 1033

AGTCTTGGCGGAGGTGACCAAAGCCACGTAAATGTCCGTAGTTCGCTCATCCGTCCATGCCAGATGGATTGTGGGG
AAGGTGATTGGGACAAAAATGCAAAAGACTGCTAAAGTGAGAGTGACCAGGCTTGTTCTGGATCCCTATTTATTA
AAGTATTTTAAATAAGCGGAAAACCTACTTTGCTCACGATGCCCTTCAGCAGTGCACAGTTGGGGATATTGTGCTT
CTCAGAGCTTTACCTGTTCCACGAGCAAAGCATGTGAAACATGAACTGGCTGAGATCGTTTTCAAAGTTGGAAAA
GTCATAGATCCAGTGACAGGAAAAGCCCTGTGCTGGAACCTACCTACCTGGAGAGTCCGTTGAGTTCGGAAACCACC
CAGCTAAGCAAAAATCTGGAAGAACTCAATATCTCTTCAGCACAGTGAAGCGGGAGTGGAAGAAGGATCTAAAGG
GAAAACTGACATGTTTATGTTATGGAAAAAGAAATTTTTCTAAGTTTCATCACAAACTGTGTCCAGTTTCTCTG
TGGTGTTTATGAAATAGCTAAAAGCAAATGAAGTAAAGGGCATACTATGGTTTTTCACAAAAAAAAAAAAAAAAAA

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FIGURE 1034

MSVVRSSVHARWIVGKVIQTKMQKTAKVRVTRLVLDPYLLKYFNKRKTYFAHDALQQCTVGDIVLLRALPVPRAK
HVKHELAEIVFKVGKVIDPVTGKPCAGTTYLESPLSSETTQLSKNLEELNISSAQ

1143/1629
FIGURE 1035

GGCGCGCTTTCAAACGCTCAGGTTTCTACCTTCCGGCTGCTTGGGAACCTCTTTCTTGCCCGCCAAGCCCGCAG
CCACCCGGGCGCGGCGGGACTCCTAGACCCGGCGCTGCGATGAAGAGGACCCGCGACGAGGTGGATGCGACGCTG
CAGATCGCCAAGCTGAATGCGGCCGAGCTGCTGCCGGCGGTGCCTGCCCTGGGCTTCGGCCCTGGGGCCAGCGGC
GCTGCAGCCGGCGACTTCTGCCTGCTGGAGCTGGAGCCCCACGCTGTGCCAGCAGCTGGAGGATGGACACAGTCTT
GTGATTCTGTTGGTGATAAAGACGAGCAAGCTGTGCTGTGCAGTAAAGACAAAACATACGACTTGAAGATAGCAGAC
ACTTCCAATATGTTGCTTTTTCATTCTGCTGGTTGTAAACTCCGGACCAGTTGAAGAAGGAAGATTCACACTGTAAC
ATTATTCACACTGAGATCTTTGGTTTTTCTAATAATTATTGGGAATTAAGAAGACGTAGACCCAAGTTAAAGAAG
CTAAAGAACTTTTGATGGAAAATCCATATGAAGGACCTGACAGTCAAAAAGAGAAGGATTCAAATAGCTCAAAA
TATACAACCTGAAGATTTGCTTGATCAAATTCAGGCAAGTGAGGAAGAAATAATGACCCAATTACAAGTTCTAAAT
GCCTGTAAGATTGGAGGTTATTGGAGGATTCTTGAATTTGATTATGAGATGAAACTTCTGAATCATGTAACCTCAG
CTTGTGGATTCTGAATCATGGTCTTTTGGTAAAGTTCCTTTGAACACATGCCTTCAGGAACCTCGGACCATTGGAG
CCAGAGGAAATGATAGAACACTGTCTTAAATGTTATGGGAAGAAATATGTAGATGAAGGCGAAGTTTATTTTGAG
TTGGATGCTGATAAAATATGTAGAGCAGCAGCACGAATGCTACTTCAGAATGCGGTGAAATTCAATCTCGCTGAG
TTTCAAGAAGTGTGGCAGCAGAGTGTTCCTGAAGGAATGGTAACTAGTCTTGATCAGCTTAAGGGTTTAGCGCTG
GTGGATAGACACTCGAGACCAGAAATCATATTTTGTGAAAGTAGATGATTTACCTGAGGATAATCAGGAACGT
TTTAATAGCCTTTTCTCTCTAAGGGAGAAGTGGACAGAAGAAGATATTGCTCCATATATTCAAGATTTGTGTGGA
GAGAAGCAAACCATAGGTGCATTACTCACTAAATATTCTCGTTCTTCGATGCAAAATGGTGTTAAAGTTTATAAT
TCGAGAAGACCCATTTCTTAAAGAACAACAGTCTTTTCTTCAGGACTCAAGTTGCTTTATAAGTTTGCTGGATA
CAAGAAAAATAACTTGTACTTTTTATTCTGACTTTTAGAAACCTAGTCTTCTAAGGCATTTTTCTCCTCATCTTA
AGCATTTTGAACTACTGTTATTTCTTAAATGTTATAGGATGTAGCTTTAAAATTATATTTGTACTATGTACACA
GTGTAAACAAGGACAAAAGAATTCTTTCTATATTATGTCTGAGGTCCTATGATTTATTTAAAGTTTGGCTTTT
TATATTTAAATGTCAATTTCTTTACTTAGGATTTGATGTTCTAATCATTAAATACACTTAAGTTTTCCAGAGAACT
AAATAGTAATAGTTTTCATAGAAGAGAACTATTTATTCACTTAAATATCATTTCTCAAGTGAGTGAGTTCCCTCT
ACTTTTAGCCTTCCACCCAACTGGAAGCCTCTAGGTGCTATCAATTATTTATATCCATCGTTTACATCCATGAA
ATTGGCTGAATAATTACTCCTCTGCCTGGCGTAGACATGTGCTTTGGGAAAAAACGAGTTTATAATCCTATAAT
GAAGAATACTGGCACAGGCAATGCTCACTCGAAAACCTCAAGTAATTTCTAGTTGGTTTTGGAATGCTTGATAAA
GTTCTTTTACAGCTTTATTTTCTGATTTGTTTTGGTTTAGATCAAAGTTCAAATTAATTTTAACTTAGCTAATG
AACTCATCACCAGGACAGTTGGAGGGGGTAGGCCGAGGTTAAATGGTCCACGTTTCAAAAATGTTAATGGCTAAT
CCATAATTAAAGAAGGTTTAACTGTTACTGAAGTTTACAAGTTTTATTGTCATGAACATGAAATACAAACACGAT
GGCTTCGAAATGTCTTTCAATAAATGTTTCTGCATTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1036

MKRTRDEV DATLQIAKLNAEELPAVHCLGFGPGASGAAAGDFCLLELEPTLCQQLEDGHSIVIRGDKDEQAVLC
SKDKTYDLKIADTSNMLLFIPGCKTPDQLKKEDSHCNIIHTEIFGFSNNYWELRRRRPKLKKLKKLLMENPYEGP
DSQKEKDSNSSKYTTEDLLDQIQASEEEIMTQLQVLNACKIGGYWRILEFDYEMKLLNHVTQLVDSESWSFGKVP
LNTCLQELGPLEPEEMIEHCLKCYGKKYVDEGEVYFELDADKICRAAARMLLQNAVKFNLAEFQEVWQQSVPEGM
VTSLDQLKGLALVDRHSRPEIIFLLKVDDLPEDNQERFNSLFSLEKRWTEEDIAPYIQDLCGEKQTIGALLTKYS
RSSMQNGVKVYNSRRPIS

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FIGURE 1037

GAGTTTTCATTTGTGGTGAGATTCTCTCCCAGGCCACAAGACATTTCTGCTCGGAACCTTGTTTACTAATTTCC
ACTGCTTTTAAGGCCCTGCACTGAAAATGCAAGCTCAGGCGCCGGTGGTTCGTTGTGACCCAACCTGGAGTCGGTC
CCGGTCCGGCCCCCAGAACTCCAAGTGGCAGACAGGCATGTGTGACTGTTTCAGCGACTGCGGAGTCTGTCTCT
GTGGCACATTTTGTTCCTTGGGTGTCAAGTTGCAGCTGATATGAATGAATGCTGTCTGTGTGGAACAA
GCGTCGCAATGAGGACTCTCTACAGGACCCGATATGGCATCCCTGGATCTATTTGTGATGACTATATGGCAACTC
TTTGCTGTCCTCATTGTACTCTTTGCCAAATCAAGAGAGATATCAACAGAAGGAGAGCCATGCGTACTTTCTAAA
AACTGATGGTGAAAAGCTCTTACCGAAGCAACAAAATTTCAGCAGACACCTCTTCAGCTTGAGTTCTTCACCATCT
TTTGCAACTGAAATATGATGGATATGCTTAAGTACAACCTGATGGCATGAAAAAATCAAATTTTGTATTATTAT
AAATGAATGTTGTCCCTGAACCTTAGCTAAATGGTGCAACTTAGTTTCTCCTTGCTTTTCATATTATCGAATTTCT
GGCTTATAAACTTTTTAAATTACATTTGAAATATAAACCAAATGAAATATTTTAACTGATAAAAAAAAAAAAAA
AAATAAAAAA

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FIGURE 1038

MQAQAPVVVVTQPGVGPGPAPQNSNWQTGMCD CFSDCGVCLCGTFCFPCLGCQVAADMNECCLCGTSVAMRTLYR
TRYGIPGSICDDYMATLCCPHCTL CQIKRDINRRRAMRTF

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FIGURE 1039

GGAAGAAAACCTGAAAAAGACCCCAAAGAAGAATATGAAAATGGTAACTGGAGCCGTAGCGTCGGTGCTGGAAGA
CGAGGCCACAGACACTTCTGATAGTGAAGGAAGCTGTGGATCGGAAAAGGACCACTTTTATTCTGATGATGACGC
AATAGAAGCTGACAGTGAGGGTGATGCTGAGCCCTGTGACAAAGAAAATGAAAATGATGGAGAATCAAGTGTTGG
GACTAATATGGGCTGGGCAGATGCTATGGCTAAAGTCCTCAACAAGAAAACCTCCTGAAAGTAAACCTACTATTCT
GGTCAAAAATAAGAAGCTGGAAAAGGAAAAAGAAAAGTTAAAGCAAGAAAGACTAGAGAAAATAAAACAGCGTGA
TAAGAGGCTGGAGTGGGAAATGATGTGCAGAGTAAAGCCAGATGTTGTCCAAGACAAAGAGACAGAGAGAAATCT
TCAGAGAATTGCAACAAGGGGTGTGGTGCAATTATTTAATGCTGTTTCAGAAACATCAAAAGAATGTTGATGAAAA
GGTTAAGGAAGCTGGAAGTTCTATGAGAAAGCGTGCTAAGTTGATATCAACTGTTTCCAAGAAAGATTTTCATCAG
TGTTTTGAGAGGGATGGATGGAAGTACAAATGAGACTGCTTCAAGCAGGAAGAAACCAAAGCCAAACAGACTGA
AGTGAAATCAGAAGAAGGCCAGGTTGGACGATCCTACGTGATGATTTTCATGATGGGAGCATCTATGAAAGACTG
GGACAAGGAAAGTGATGGGCCAGATGACAGCAGACCAGAATCTGCAAGTGACTCTGATACATTAAGCATCATAGG
AAATACAATTGCAGTCGTTTTATTTTTTCTAGAAAAATATGTCATCCTCTGATAGTTGGGGAATTATAAGGATAC
CATTTGTAAGAAAGCCAAAAGACTTTTGCCAGATTTTCATATTTCCCCTTTTCATGTACACTTTATATATACTTCA
TTAAAATTATATTTTAAACCCTTGTATAATTTTAAGCATTGTTTCCTCAGAACATTTGTAAAAGGATATATTTCTG
CTTGACCAGCGAGATGTGCATTTTGCCAGGATCATATTGGTCATGTCTATTGGTGTATTATTTTCAGTATCACCAA
TGTTTTTCAGAAATACAGTACTAATTCATCATTAAACTCTTTGAAGTTAATATTTTTCTGCCTTCTAACTTATAGA
CTCAACTATGTATCTGTAGTTTTTGGGAATGGTTGGTGTTTTTTGCTTTGTGTTGGGAAGTTATTGAGAAAACCT
ATATAATAAAATTTAAAATTATAGTTTTTCAA

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FIGURE 1040

MKMVTGAVASVLEDEATDTSDSEGSCGSEKDFYSDDDAIEADSEGDAEPCDKENENDGESSVGTNMGWADAMAK
VLNKKTPESKPTILVKNKKLEKEKEKLQERLEKIKQORDKRLEWEMMCRVKPDVVQDKETERNLQRIATRQVQVQL
FNAVQKHQKNVDEKVKEAGSSMRKRAKLSTVSKKDFISVLRGMDGSTNETASSRKKPKAKQTEVKSEEGPGWTI
LRDDFMMGASMKDWDKESDGPDDSRPESASDSDT

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FIGURE 1041

GCTGCCGCCCCGCACTCGGGCGAGCGCGGGAGCCGCACAGTAGACGGAGCGCGCCCGGGCCGAGCGGGCCATGGCC
GCGGGGGCCGCCGCCGCGCAGGTGGTGGCGCGCGGTGAGGAGAGCGCGGCGCCCCCTCCGGGGCGGATGGAAACGCGG
CTCGGCGGGCGGGCAGTGCCGGCGTCCGCGGCTGGAATGGTGTGCTGGCTGTGTTGGTCGGTGCCTGCGTTCTGAAG
CCCAGAGGAGCCACA**ATG**GAGACGCCGCCGCTGCCTCCCGCATGCACAAAGCAGGGTCATCAGAAGCCTCTCGA
TTCAAAAGATGATAATACCGAAAAACACTGCCCAGTGACAGTGAATCCTTGGCATATGAAGAAAGCTTTCAAAGT
CATGAACGAATTAAGAAGTCAAAATTTGCTGTGCGATGTCACAATTGTGGCAGAAGACATGGAAATTTCTGCTCA
TAGAGTGGTGTGCGCCGCTGTAGTCCTTATTTTCATGCCATGTTTACAGGTGAGATGAGTGAGAGCCGAGCAAA
GAGAGTTAGAATAAAAGAGGTAGATGGCTGGACCTGAGGATGCTAATTGATTATGTTTACACTGCAGAAATTC
GGTTACAGAAGAAAATGTACAGGTACTTCTCCCAGCAGCTGGTCTCTTACAGTTACAGGATGTGAAGAAGACTTG
TTGTGAATTTTTGGAATCCAGCTTACACCTGTCAACTGCTTAGGAATCCGGGCTTTTGTGATATGCATGCATG
TACTGACCTTCTGAACAAGGCCAACACCTATGCAGAGCAACATTTTGCAGATGTTGTACTTAGTGAAGAATTTCT
CAATCTTGGCATCGAACAAGTGTGCAGCTTAATCTCAAGTGACAACTTACCATTTCTTCAGAAGAGAAGGTATT
TGAAGCAGTAATAGCATGGGTGAACCATGACAAGGATGTGAGGCAAGAGTTTATGGCCCGACTGATGGAACATGT
ACGGTTACCTTTGCTTCCGCGGAATATTTAGTTCAGAGGGTTGAAGAGGAAGCATTGGTCAAGAATAGCAGTGC
TTGCAAAGATTACCTCATTGAAGCAATGAAGTACCATTTGCTGCCAACAGAGCAGCGTATATTAATGAAGAGTGT
CCGGACCCCGCTGAGGACACCCATGAACCTTCCCAAATTGATGGTGGTGGTGGGGGCCAAGCACCAAAGGCTAT
CCGGAGTGTGGAATGCTATGACTTTAAAGAAGAAAGGTGGCACCAGTAGCAGAGTTGCCTTCCAGGAGGTGCAG
GGCAGGCATGGTCTACATGGCTGGACTTGTTTTTGCTGTGGTGGCTTTAATGGCTCATTAAAGAGTTTCGCACTGT
AGATTCCTACGACCCTGTGAAGGACCAGTGGACCAGCGTTGCTAACATGAGAGACCGGAGAAGCACTTTGGGAGC
TGCTGTGTTAAATGGATTATTATACGCTGTGGGAGGCTTTGATGGGAGTACAGGTTTGTCTGTGGAAGCATA
CAACATAAAGTCTAATGAGTGGTTTCATGTAGCTCCCATGAATACAAGGAGGAGCAGTGTGGTGTGGGTGTTGT
TGGAGGTTTGCTCTATGCTGTAGGAGGTATGATGTAGCATCACGTCAGTGTCTTAGCACAGTAGAATGCTATAA
TGCTACAACAAATGAGTGGACCTATATAGCAGAAATGAGCACCAGGCGGAGTGGAGCAGGTGTTGGTGTGTTAA
CAATTTATTGTATGCTGTAGGAGGTATGATGGCCCTTTAGTACGAAAAAGTGTGAAGTATATGATCCCACCAC
TAACGCATGGAGACAGGTTCAGATATGAACATGTGCAGAAGAAATGCAGGAGTTTGTGCAGTTAATGGTCTGTT
ATATGTTGTTGGAGGGGATGATGGTTCCGTGAACCTGGCGTCAGTAGAATATTATAACCCAACAACCGATAAATG
GACAGTTGTGTCTATCGTGTATGAGCACAGGGAGAGTTATGCAGGGGTCACAGTTATTGATAAACGATTAT**TGAGC**
CTGAAGGACATTTTCAGCATATTTATACATGAGAAACAGCCTTCAACAAGTATTTGTGAAGTGAAGTGAAGTCTA
GCATTTCTCCACTTGTAGCTGCACCTTAAAGTCTCAGCAGAAGATACGATCGTCTGCCTTTATAGGCCTCAGATAC
TGAAGATTATTTTTGGTAGAAGCACCGTGTAGGCTTTTTCTGCAATGAGCAGCAGCTGACTGAATTTTCATAAGA
AACTTGGACTGCAGGACTTAATCTGTAGTCTTTAGACAACAGTTGCTTTTATAAAGACTAGTTCTTATCAACCTT
GAATGACTACAGATTATTTTGTGAAGGAGGATGAAGTAATGTGTGTTCTTGTAATAATTAAATTTTATCTTTATTT
CTTCTAAAAATCTGTATACCAGGAACCTGAAAAATCTTTGAACAGATATTAATAATCTACGTAAGTATACAACTAGT
TGAGGGATACACTGTTTGCTTTTATAAAATAACTTTGATTACATGAATATAATAAATTATGTGCATATAAATGTG
TGTCTATATGCTTTTCTTTAAATATGTTTGAAAAGATGTTTGAAACTTGATTATACTATTTATAATTGGCACAGT
ACTTTGAATTATGCCAGTACTACATTGTAAAACAGAGTTGTATTTTTTGTATTTTAAACAATGCTTAACACTTTAA
ATGCCACTTCTGAGGAATGGACCTGGTGTAAACACACTGAATATGTGTGATGCCAACTTTTTTAAATACAATAT
AAGTTATGCTTATTTATTTATTTTCTTTAGTTAATCTTGGTCATGTTTTGGTGTGTATTTTAAATTTTTTCTTA
AATTAACACTTTGGCATGAACATTACTGCAGGTTTTTGATGAATATAATGAATGTATGGAATTCATTGAATTTG
CATGGTCTTCGGAATTTTTTCTGTGTGTATAAATTTAGCTGCTATTAACAGAAGAGAGAACTTTCTGTGAGTAGC
CATGTGTGTTGATCAGATACAGTTTTTCTGAGATCTTCAATTAATCTCACTTTAAAAATGACCAAAACATGTCTT
TCTTGAATTAACCTTTGAATAAAAGTTTGTATATTAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAAAA
AAAAAAA

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FIGURE 1042

METPPLPPACTKQGHQKPLDSKDDNTEKHCPVTVNPWHMKKAFKVMNELRSQNLLCDVTIVAEDMEISAHRVLA
ACSPYFHAMFTGEMSESRKRVRIKEVDGWTLRMLIDYVYTAEIQVTEENVQVLLPAAGLLQLQDVKKTCCEFLE
SQLHPVNCLGIRAFADMHACTDLLNKANTYAEQHFADVVLSEEFNLGIEQVCSLISSDKLTISSEEKVF EAVIA
WVNHDKDVRQEFMARLMEHVRLPLLPREYLVQRVEEEALVKNSSACKDYLIAMKYHLLPTEQRILMKSVRTRLR
TPMNLPKLMVVVGQAPKAIRSVECYDFKEERWHQVAELPSRRCRAGMVYAGLVFAVGGFNGSLRVRTVDSYDP
VKDQWTSVANMRDRRSTLGAAVLNGLLYAVGGFDGSTGLSSVEAYNIKSNEWFHVAPMNTRRSSVGVGVGGLLY
AVGGYDVASRQCLSTVECYNATTNEWTYIAEMSTRRSGAGVGLNNLLYAVGGHDGPLVRKSVEVYDETTNAWRQ
VADMNMCRRNAGVCAVNGLLYVVGGDDGSCNLASVEYYNPTTDKWTVVSSCMSTGRSYAGVTVIDKRL

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FIGURE 1043

AGAAATCAACTGCTTAGCCGGGTTGTTAGGAGGATCTGATGAGACTAGGATGTGAGTTGAAACTGCTGTGCCAGG
CACACCTGTGTGGGTCTCACTTGTGCCAGGCATACCTGCGTGGGTCTCACCTGTGTAGGTCTCACCTGTGCCAGG
TGTACCTGTGTGGGTCTTACCTGTGCAGGTCTCCTGATGCAGGTCTCACCTGTGCCGAGTGTACCTACCTGTGCC
GGTCTCACCTGTGTGAGGCGTACGTGTAGGGGTCTCACCTGTGAACGTCTCACCTGTGCCAGGTGTATACCTGTG
TGGCTCTCACTTGTGTGGGTCTGGTATGTGACAAAGGCCTGGGAATTGGCAGCTGTTCATCTGCCAGGAGCAGACC
CTGAGCCAAGTTCCCTGTGCCCTTAGGCTCATTTTCATGCCCTCAGCTCTGGGAGGCCAATCCCTTTACTGCCACAT
TTTATAAATGGAAGACTGAGGTTAAGCAGTGGGCCAGGGCCATAGAACAGCTGAGCTGTGGAGCTGGACATCGA
CCTTGGGCAGGTGCTGCCAGGGGCTGAGCCAGGCCCTCCACTCCCGCATCCTCTGATGACCCATCCTGGGTGA
GTGGAGGCATCTGCCCGCGCCAGTCAGGCCAGTGGTGATGSCCCCCATGCCACAGGACAGAAGCTGCTGGACT
CACTGGCAGAGACCTGGGACTTCTTCTTCAGTGACGTGCTGCCCATGCTGCAGGCCATCTTCTACCCGGTGCAGG
GCAAGGAGCCATCGGTGCGCCAGCTGGCCCTGCTGCACCTCCGGAATGCCATCACCTCAGTGTGAAGCTAGAGG
ATGCGCTGGCCCGGGCCCATGCCCGCTGCCCTGCCATCGTGAGATGCTGCTGGTGTGTCAGGGGGTACATG
AGTCCAGGGGCGTGACTGAGGACTACCTGCGCCTGGAGACGCTGGTCCAGAAGGTGGTGTGCCATACCTGGGCA
CCTACGGCCTCCACTCCAGCGAGGGGCCCTTACCCATTCTGTCATCCTGGAAAAGCGCCTCCTCCGCGCTCCC
GCTCGGGGACGTGCTGGCCAAGAACCCTGTGGTGTGCTCCAAGAGCTACAACACGCCTCTGCTGAACCCCGTGC
AGGAGCACGAGGCGGAGGGCGCGCGCGGGTACCAGCATCCGCTGGCACTCTGTGTGCGAGATGACGTCTT
GCCCCGAGCCTCAGGGCTTCTCCGACCCGCGCGGCCAGGGCCCCACCGGGACCTTCAGGTCTCCCGGCGCCCC
ACTCAGGGCCCTGCCCCAGCAGACTGTACCCACGACCCAGCCCCCTGAGCAGGGCTTGGATCCACCCGCGAGCT
CCCTGCCCCGCTCCAGCCCGGAGAACCTGGTGGACCAGATCCTGGAGTCCGTGGACTCGGATTCTGAAGGGATT
TCATTGACTTTGGCCGGGGCGGGGCTCTGGCATGTCCGACTTGGAGGGCTCTGGGGGCGGGCAGAGTGTCTGTG
GAGGCCTCACAGCTGGCCTTGAGTTTTTACTGACACGTCCCTGTGTGCGGGGTGTCCATGTGGCGTGTGTGTA
GTGAGACTTTTTTACTGCGTCCCGTCCCGCCAGCCCTGTGCGCCTCGTCACTGGCCTTGGTCACTTTGTATTTCT
GTCTTGGTTGGAAATACCATCAGCCTTCCTTGCTCGGCCCAGGTCTGTTCAGGCATCTGAGTCAGCGTTTACCC
AGGGGCGGGCCAGAGACGGGGGCGGGCGCTCGCTCCCACGCTCCTCCTGCCCCAGCCCTCTGGTGTCCACACC
TGCCACAGAGAATGTAAACCCAGTGGGCTCTGCCCACGCGGGCCCCAAAGTGACCAGACTCCAGCACACCTGT
CTCCTCCTGCCTGGGGTGGCCATGGGGATGGAAGGGGTGGAATAAAACCTGTCAACCTGAAAAAAAAAAAAAA
AAAAAA

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FIGURE 1044

MAPMPTGQKLDSLAE TW DFF FSDVLPMLQAIFYPVQGKEPSVRQLALLHFRNAITLSVKLEDALARA HARVPPA
IVQMLLV LQGVHESRGVTE DYLRLET LVQKVVS PYLGT YGLHSSEGPFTHSCILEKRLRRSRSGDVLAKNPVVR
SKSYNT PLLNPVQEHEAEGAAAGGTSIRWHSVSEMTSCPEPQGFSDPPGQGPTGTFRSSPAPHSGPCPSRLYPTT
QPPEQGLDPTRSSLPRSSPENLVDQILESVDSDSEGIFIDFGRGRGSGMSDLEGSGGRQSVV

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FIGURE 1045

TGTCAAAAGCCTGCACACGAGACCCCCGTGGGCCAGGACTGACTTCCTCCCCACACAGGGCTGGGCGGGGCAAGC
AGGAAGGAGCCTGTTACAGTCAAGGTGACGCATCCTTGCCGGGCCAGCCCCGAACAGCAGCTGGGTGCGCAAGCGA
CAGGAGCACGGGTTCATCTTTTCCCCAGAGGCGTCGGAATGACCTGTGCCACCCAGAGCCCGCGGAGCTGAGCAG
CGGGGAGACGGAAGAGTTACAGAGGATCAAGTGGCACCAGAAAGCAGCTCCTGGAGGACATCCAGAAGCTGAAGGA
TGAGATTGCAGATGTGTTTGGCCAAATCGACTGCTTCGAGAGTGGGAGGAGAGCCGGATGGCCAGAAGGAGAA
GGAGCTGTGTATTGGGCGCAAGAAGTTCAACATGGACCCCGCCAAGGGTATCCAGTATTTTCATTGAGCACAAGCT
GCTGACCCCTGACGTCCAGGACATTGCACGGTTCTGTATAAAGGCGAGGGCCTCAACAAGACAGCCATTGGTAC
CTACCTGGGGGAGAGGGATCCCATCAACCTGCAGGTCTCCAGGCCTTCGTGGACTGCCACGAGTTCGCCAACCT
CAACCTCGTCCAGGCCCTCAGGCAGTTCCTGTGGAGCTTCGGGCTGCCGGGCGAGGCCAGAAGATAGACCGGAT
GATGGAGGCCCTTTGCCACTCGATACTGCCTCTGCAACCCAGGCGTCTTCCAGTCCACAGACACCTGCTACGTGTT
GTCCTTCTCCATCATCATGCTCAACACCAGCCTCCACAATCCCAACGTCCGGGACAGGCCGCCTTTTCGAGCGCTT
TGTGTCCATGAACCGCGGCATCAACAATGGTAGCGACCTGCCGAGGACCAGCTGCGGAACCTCTTCGACAGCAT
CAAGAGTGAGCCATTCTCCATCCCTGAGGACGACGGCAATGACCTCACTCACACCTTCTTCAATCCAGACCGGGA
GGGTTGGCTGCTCAAGCTAGGGGGCGCGTGAAGACGTGGAAACGGCGCTGGTTCATCCTGACCGACAACCTGCGCT
CTACTACTTCGAGTTTACCCTGACAAGGAGCCACGGGGAATTATACCTCTTGAGAACCTCTCGGTGCAGAAGGT
GGATGACCCCAAGAAGCCATTCTGCCTGGAGCTCTACAACCTAGCTGCCGAGGCCAGAAAATCAAGGCCTGCAA
GACCGATGGCGACGGCAGGGTGGTGGAGGGCAAGCACGAATCGTACCGCATCTCAGCCACCAAGTCCGAGGAACG
TGACCAGTGGATCGAGTCCATCCGAGCCAGCATCACCCGTGTCCCCTTCTACGACCTGGTCTCTACTCGGAAGAA
GAAGATTGCCAGCAAGCAGTGAAGATTCTGGAGGTGGCACTGGGGGCTGGTCACCCTGAGAGTCCCATCGCCTGC
AGCACCTGGAGACCCACCTCCCCACCCAGTGCACCTCTTTTGGGCCACAGACATCATTGCTGTTCCCCGTACCTC
GAGCTGACTCTAGAGGGGAAGGCAGAGCTCAGGAGGGTGGGTGGGAGCTGCAGTGGGCTCAGAGTCCAGCAATGA
GGCCCCCTGGCCTGGGCACCCAGCTGCAGGCCCTGCCCTACGTGCACTACAGGAAGGGGTGAGGAGAGCAGCCA
GAGGAAAACAGCCCCAGAATGCTGCAACTTCTTCTCTCTGGAATTCGGTGTCTCGGCTCTGAAGGCGCTCT
CTGCACCTTAGATGCTGTGACCCCTCAACGTAGGAGGGGCGTGGGGTCCCTAAGTGATTCTTCTCCCTGGCAAGG
CTCTTCTTTTTCAGGGATATCTCTGCCAACCTTCCCCTGTCTCGGGTGGGCTGGGCCCTCTCTGCCTGAGAG
AGCTCAGCACACACAGCTCAGACCCACGGACAGGACCCCGGGACAGAACCCCGGGAGCACTGCCCTAGGAGCC
TGGACCCACAGAGCTCAGTCCCAGCTCTGCCTCTGACTCGCTGTGTACCTCTGCCAAGTCATGCCATTCTCTA
GTTCTTGCAAACTGCAGTGTGTTGGACTAGAAACGTATTGGCCCTGCTAGCCCTGTGCTCCAGCTTCCAGCTGG
AGATGGCAGCCGTTATTTGCGGAGCCAGGCTGACTCCGATTCAACGTTGCTGGGGAGAGAAAAGCAGTATAGA
CTCCACCTTCCAGGATGTCCATTTCGGGGAGAGGAGCAGGTGGGACCCTCAAGAAAATGACGGAGAACATCCAG
ACAGATGGGACTCAAGCAGGATGGGTGCTATATCCAAGAAGCCAAGAAGGGAGAGTTTCGTGCACTGTGGTTAAC
AGGAGGGCCGCTGGAGGCAGTGGCTGAGCCAGAAAGTAACACAGAGCTCATGCTTGGAGAGATAGAGTCTTGGC
CATGGCTTTCTGCAAGACCACTGACGAGCAGTCCCATGGTGATAAAGGGCAGCCCGGCGGGTCCCAGCATCTCG
AGACCTCTGCAGAAGTATTATCAGAGTAGAGCTGACTTCCAGTACCCGGGCAGCCAGCTCTGTCTCCAGGGAGG
CCTGGCCTGGAGGAGGAGTCCACTAACAGGAAACACTTCTCACCCCTCACACAGGCCAGGGGAGCCCTGGAG
GGAAATTCTTGGCAGGGGAACAGGAAATGTGGTGCCTCTGCCCCACTGCCAGCCTGAGTGGGCAAGGAAGCAG
GTGGATCCCCCAGAAGGAACCGCAGCTCGCGAGGCACCTCTCTCGTCCCCACCCACCCACATTTGCACACCT
TCCACAGGGTCAGGATGGAGTAGCTGCCTTGGCAGGTGGTGAGACTCCTGTCTCTGGAGGTCTGCAAGCACTGGT
AGTGATATTGCAGCAGACAAGGTCTGGGTGGGCGTCTGCAGGAGGAGACCTTGTGGGACATCTGAGGACATCCG
CAGATTCTTGTGACCTGTGAACTAGGCCCTGCCTCTGTACCTCATTGGTCCATGAAGGAGCAGCCAGGGGTGG
TGGAAGGAGCACTGGGCTAGGGGTGAGGGTCAAGATTCTGTCTGTCTCTGGGATGCACTGGCTACTCCCTTA
GTCTACTCCCTTCCCCTCTCTGGTCTCAGCTTCTCCATCATGGAGGAGATGGGATCATGGATTTTCTGGGCAT
AAGTGGCTGTTCTGGGAGTCATTCCAAGAGAGAATAAACTCCTGATCCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1046

MDLCHPEPAELSSGETEELQRIKWHRKQLLEDIQKLKDEIADVFAQIDCFESAEESRMAQKEKELCIGRKKFNMD
PAKGIQYFIEHKLLTPDVQDIARFLYKGEGLNKTAIGTYLGERDPINLQVLQAFVDCHEFANLNLVQALRQFLWS
FRLPGEAQKIDRMMEAFATRYCLCNPGVVFQSTDTCYVLSFSIIMLNTSLHNPVNVRDRPPFERFVSMNRGINNGSD
LPEDQLRNLFDSIKSEPFSSIPEDDGNDLTHFTFFNPDREGWLLKLGGRVKTKRRWFILTDNCLYYFEFTTDKEPR
GIIPLENLSVQKVDDPKKPFCELYNPSCRGQKIKACKTDGDGRVVEGKHESYRISATSAEERDQWIESIRASIT
RVPFYDLVSTRKKKIASKQ

1155/1629
FIGURE 1047

GTGTTTTCTGCGTGAGAGGAAAAGATGCTAGAACACAGGAGAATGGCGTGATTGACCTACCAGATTATGAGCAT
GTAGAAGATGAACTTTTCTCCTTTCCACCTCCAGCCTCTCCAGAGAGACAAGATGGTGAAGGAAGTGAAGCCT
GATGAAGAGTCAGGAAATGGAGCACCTGTTCTGTACCTCCAAAGAGAACAGTTAAAAGAAATATACCCAAGCTG
GATGCTCAGAGATTAAATTTAGAGAGAGGACTTCCAGCCTTAAGGCATGTATTTGATAAGGCAAAATTCAAAGGT
AAAGGTCATGAGGCTGAAGACTTGAAGATGCTAATCAGACACATGGAGCACTGGGCACATAGGCTATTCCCTAAA
CTGCAGTTTGAGGATTTTATTGACAGAGTTGAATACCTGGGAAGTAAAAAGGAAGTTCAGACCTGTTTAAAACGA
ATTGCACTTGATCTCCCTATTTTACATGAAGATTTTGTTAGCAATAATGATGAAGTTGCGGAGAATAATGAACAT
GATGTCACCTTCTACTGAATTAGATCCCTTTCTGACAACTTATCTGAAAGTGAGATGTTTGCTTCTGAGTTAAGT
AGAAGCCTAACAGAAGAGCAACAACGAAGAATTGAGAGAAATAAACAACTGGCCTTGGAAGAAGGCAGGCAAAAG
CTGCTGAGTAATAGTCAGACCCTAGGAAATGATATGTTAATGAATACACCCAGGGCACACACGGTTGAAGAGGTT
AATACTGATGAGGATCAAAGGAGGAGTCAAATGGATTAAACGAAGACATTCTGGACAATCCATGTAATGATGCT
ATTGCCAATACTTTAAATGAAGAGGAAACACTGCTGGACCAGTCTTTTAAAAATGTGCAACAGCAACTTGATGCT
ACATCCAGAAATATTACTGAAGCTAGATAAGTTTCCATTAAAGAGAAAAATGTATCTGTTAAGTCATCGTCCCTGCAA
GCTTGGCGTTACTATGTATTTTTTCTTCTTGAGTGAAAATCCTTAGATAGTAAACTGTTATAGATTATTGTTT
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

1156/1629
FIGURE 1048

MLEPQENGVIDLDPDYEHVEDETFPPFPPPPASPERQDGEGTEPDEESGNGAPVPVPPKRTVKRNIPKLDAQRLISE
RGLPALRHVFDKAKFKGKGHEAEDLKMLIRHMEHWAHRLFPKLQFEDFIDRVEYLGSKKEVQTCLKRIRLDLPIL
HEDFVSNNDEVAENNEHDVISTELDPFLTNLSESEMFASELSRSLTEEQORRIERNKQLALERRQAKLLSNSQTL
GNDMLMNTPRAHTVEEVNTDEDQKEESNGLNEDILDNFCNDAIANTLNEEETLLDQSFKNVQQQLDATSRNITEA
R

1157/1629
FIGURE 1049A

CGCTCGGAAAGTTTCAGCATGCAGGAAGTTTGGGGAGAGCTCGGCGATTAGCACAGCGACCCGGGCCAGCGCAGGG
CGAGCGCAGGCGGCGAGAGCGCAGGGCGGCGCGGCGTCCGGGAGCAGAACCCGGCTTTTCTTGGAGCGA
CGCTGTCTCTAGTCGCTGATCCCAAATGCACCGGCTCATCTTTGTCTACACTCTAATCTGCGCAAACTTTTGCAG
CTGTCTGGGACACTTCTGCAACCCCGCAGAGCGCATCCATCAAAGCTTTGCGCAACGCCAACCTCAGGCGAGATGA
GAGCAATCACCTCACAGACTTGTACCGAAGAGATGAGACCATCCAGGTGAAAGGAAACGGCTACGTGCAGAGTCC
TAGATTCCCGAACAGCTACCCAGGAACCTGCTCCTGACATGGCGGCTTCACTCTCAGGAGAATACACGGATACA
GCTAGTGTGTTGACAATCAGTTTGGATTAGAGGAAGCAGAAAATGATATCTGTAGGTATGATTTTGTGGAAGTTGA
AGATATATCCGAAACCAGTACCATTATTAGAGGACGATGGTGTGGACACAAGGAAGTTTCTCCAAGGATAAAATC
AAGAACGAACCAAATTAATAATCACATTCAAGTCCGATGACTACTTTGTGGCTAAACCTGGATTCAAGATTTATTA
TTCTTTGTCTGGAAGATTTCCAACCCGCAGCAGCTTCAGAGACCAACTGGGAATCTGTCAACAAGCTCTATTTTCAGG
GGTATCCTATAACTCTCCATCAGTAACGGATCCCACTCTGATTGCGGATGCTCTGGACAAAAAAATTCAGAAATT
TGATACAGTGGGAAGATCTGCTCAAGTACTTCAATCCAGAGTCATGGCAAGAAGATCTTGAGAATATGTATCTGGA
CACCCCTCGGTATCGAGGCAGGTCATACCATGACCGGAAGTCAAAGTTGACCTGGATAGGCTCAATGATGATGC
CAAGCGTTACAGTTGCACTCCCAGGAATTACTCGGTCAATATAAGAGAAGAGCTGAAGTTGGCCAATGTGGTCTT
CTTTCCACGTTGCTCCTCGTGCAGCGCTGTGGAGGAAATTGTGGCTGTGGAAGTGTCAACTGGAGGTCCTGCAC
ATGCAATTTCAGGGAAAACCGTGAAAAAGTATCATGAGGTATTACAGTTTGGAGCTTGGCCACATCAAGAGGAGGGG
TAGAGCTAAGACCATGGCTCTAGTTGACATCCAGTTGGATCACCATGAACGATGTGATTGTATCTGCAGCTCAAG
ACCACCTCGATAAGAGAATGTGCACATCCTTACATTAAAGCTGAAAGAACCTTTAGTTTAAAGAGGGTGAGATAA
GAGACCCCTTTTCTACCAGCAACCAAACCTTACTACTAGCCTGCAATGCAATGAACACAAGTGGTTGCTGAGTCTC
AGCCTTGCTTTGTTAATGCCATGGCAAGTAGAAAAGGTATATCATCAACTTCTATACCTAAGAATATAGGATTGCA
TTTAATAATAGTGTGTTGAGGTTATATATGCACAAACACACAGAAATATATTCATGTCTATGTGTATATAGATC
AAATGTTTTTTTTTGGTATATATAACCAGGTACACCAGAGCTTACATATGTTTGGAGTTAGACTCTTAAATCCTTT
GCCAAAATAAGGGATGGTCAAATATATGAAACATGTCTTTAGAAAATTTAGGAGATAAAATTTATTTTAAATTTT
GAAACACAAAACAATTTTGAATCTTGCTCTCTTAAAGAAAGCATCTTGTATATTAAAAATCAAAAAGATGAGGCTT
TCTTACATATACATCTTAGTTGATTATTAATAAAGGAAAAATATGGTTTCCAGAGAAAAGGCCAATACCTAAGCA
TTTTTCCATGAGAAGCACTGCATACTTACCTATGTGGACTATAATAACCTGTCTCCAAAACCATGCCATAATAA
TATAAGTGCTTTAGAAATTAAATCATTGTGTTTTTATGCATTTTGTCTGAGGCATGCTTATTCATTTAACACCTA
TCTCAAAAACCTTACTTAGAAGGTTTTTATTATAGTCTTACAAAAGACAATGTATAAGCTGTAAACAGAAATTTGA
ATTGTTTTTCTTTGCAAAACCCCTCCACAAAAGCAAATCCTTTCAAGAATGGCATGGGCATTCTGTATGAACCTT
TCCAGATGGTGTTTCAAGTGAAGATGTGGGTAGTTGAGAACTTAAAAAGTGAACATTGAAACATCGACGTAACCTG
AAATTAGGTGGGATATTTGATAGGATCCATATCTAATAATGGATTGAACTCTCCAAACTACACCAATTAATTTA
ATGTATCTTGCTTTTGTGTTCCCGTCTTTTTGAAATATAGACATGGATTTATAATGGCATTTTATATTTGGCAGG
CCATCATAGATTATTTACAACCTAAAAGCTTTTGTGTATCAAAAAATCACATTTTATTAATGTAAATTTCTAAT
CGTATACTTGCTCACTGTTCTGATTTCCTGTTTCTGAACCAAGTAAATCAGTCTTAGAGGCTATGGTTCTTAAT
CTATGGAGCTTGCTTTAAGAAGCCAGTTGTCAATTGTGGTAACACAAGTTTGGCCCTGCTGTCTCTACTGTTTAAT
AGAAAACCTGTTTTACATTGGTTAATGGTATTTAGAGTAATTTTTTCTCTCTGCCTCCTTTGTGTCTGTTTTAAAG
GAGACTAACTCCAGGAGTAGGAAATGATTCATCATCTCCAAAGCAAGAGGCTTAAGAGAGAAACACCGAAATTC
AGATAGCTCAGGGACTGCTAACAGAGAACTACATTTTTTCTTATTGCCTTGAAAGTTAAAGGAAAGCAGATTTT
TTCAGTGACTTTGTGGTCTCTAATACTACAACCAAGTTTGGGTGACAGGGCTGGTAAAGTCCCAGTGTTAGATGAG
TGACCTAAATATACTTAGATTTCTAAGTATGGTGCTCTCAGGTCCAAGTTCAACTATTCTTAAGCAGTGCAATTC
TTCCAGTTATTTGAGATGAAAGATCTCTGCTTATTGAAGATGTACCTTCTAAAACCTTCTTAAAAGTGTCTGAT
GTTTTTACTCAAGAGGGGAGTGGTAAATTAATACTCTATTGTTCAATTCTCTAAAATCCCAGAACACAATCAG
AAATAGCTCAGGCAGACACTAATAATTAAGAACGCTCTTCCTCTTCATACTGCTTTGCAAGTTTCTGTGAAAA
CATCAGTTTCTGTACCAAAGTCAAATGAACGTTACATCACTTAACCTGAACAGCTCACAATGTAGCTGTAA
TATAAAAAATGAGAGTGTCTACCCAGTTTTCAATAAACCTTCCAGGCTGCAATAACCAGCAAGGTTTTTCAGTTA
AAGCCCTATCTGCACTTTTTATTTATTAGCTGAAATGTAAGCAGGCATATTCACCTCACTTTTTCTTTGCCCTTTCT
GAGAGTTTTATTAATAACTTCTCCCTTGGTTACCTGTATCTTTTGCACCTCTAACATGTAGCCAATAAATCTATT
TGATAGCCATCAAAGGAATAAAAAGCTGGCCGTACAAATTACATTTCAAACAAACCTAATAAATCCACATTTT

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FIGURE 1049B

CGCATGGCTCATTACCTGGAATAATGCCTTTTATTGAATATGTTCTTATAGGGCAAACACTTTCATAAGTAGA
GTTTTTTATGTTTTTTGTCATATCGGTAAACATGCAGCTTTTTCCTCTCATAGCATTCTTATAGCGAATGTAATA
TGCCTCTTATCTTCATGAAAAATAAATATTGCTTTTGAACAAAAAAAAAAAAAAAAAAAAA

1159/1629
FIGURE 1050

MHRLIFVYTLICANFCSCRDTSATPQSASIKALRNANLRRDESNHLTDLYRRDETIQVKNGYVQSPRFPNSYPR
NLLLTWRLHSQENTRIQLVFDNQFGLEEAENDICRYDFVEVEDISETSTIIRGRWCGHKEVPPRIKSRTNQIKIT
FKSDDYFVAKPGFKIYYSLLEDFQPAAASETNWESVTSSISGVSYNPSVTDPTLIADALDKKIAEFDTVEDLLK
YFNPESWQEDLENMYLDTPRYRGRSYHDRKSKVDLDRNLNDDAKRYSCTPRNYSVNIREELKLANVFFPRCLLVQ
RCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKTMALVDIQLDHHERCDCICSSRPFR

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FIGURE 1051

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTACAGCCCGTTCCCTCCCGGAGCCCGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCTCACTGCGTT
TTTTTTTCTTTTATCCAAAGAACGGGGCAGTTAGTACGCTTGCCTTCCTGTGCGCCGGTTGGGAGCGGGGTTGG
TGTGCGGAGTGGTTCGCCCTTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTTCTTTCTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGGCCGGTCCCTGACTAACGGCTTTCTGCCCCCTTCTCTGCCACCCCTGC
CCAAGGTCGCCCTCTGCCTTCGCCCCGTGTCCGGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCACTCGCGTC
TCCGAGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTTCCGTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAAGGATGTCTGACACTTTTATACTG
GAAGGGGTGGTGAACCTTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGAATGCGAGATTCCATACACT
ACTACCCTGGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTCACTGAACCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCATGAATAGTAATATGGGTACAGGTACATTTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACACTACAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCTCGGAGAGCCTTTAAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACCTTTTATTATTGTTA
ACTGTGAAAAGTACGTCCTTTATTGGGTTTTCTTTTATATTCTTGGTTTGTAAAGAAGAATGGTTTGTTTTATA
GCAAACTGTTAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTCATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTC
TTGTATTAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTGTGGCTCTCGGAATGATTGACTTCGTTTCAGTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTGTGTATTACCAAAAAACAGATTCTTATCAGAAATTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTAAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAATTTAAACTGGGGCCTTGAATATTTATTTTGAAACTACCATGTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTATCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAAATTGAATTCATATAGTAACATGCAGTCTGAAGTCCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTCAGAAATATAAAAGTGGA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCTTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTAAACAAACCTACGTAATTTTGGCCCTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTGAAAACCTCCATAGCATTTGAAT
ACAAAAGTTGTGCCAGATTGTTTGGCCTAATTCAGTGTGTTTAAACAAATATTTTCAGTACACACTATGTATTAGG
CACTGTGTGGAAAGTGTTAAGGGGTAGACAAGATACCGAATAATCTCCACAAGTTTATTTGTGGTCTATAGTACT
TTTGTAACCTGGGGTTACAAAAATTATAGAAATTTTTTCTTTGTTTCATATGCATATTCATGATTATAATTTGGC
TTTGTGTGTGATTAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAAGAAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTAGAATTTTTAAAAACCTACAAATTAGTATATGATTGTTTTA
TATAAGTAAGATAGGAGCAACACTTTAAATTTTGTGGGAGAATACAGCATTAAAGGTGATTTTAAAAGAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1052

MNRVNDPLIFIRDIKPGLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSSLGV

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FIGURE 1053

ATTCCCCAACCTGATAGCCCTCCGCGACGCATTACGCACCGCGGACAGCTGGAGAGGCCGAGGCGCTCTCGCTTT
GATTTGCGCGCCTCCGCCCTCGCGGGGAGAGATTGGCTGCGGCCGCGGGACGGGGTAGTGAGCGCGTCACTTCCT
GCCGCTGCCAGGCGCGTCTCCCGCGCGCTATGACGGCCAGCGCACAGCCGCGCGGGCGGGCCAGGAGTCGGA
GTCGGAGTCGTGGTGACCAGCTGCAAGCATCCGCGTTGCGTCTCTCTGGGGAAGAGGAAAGGCTCGGTTGGAGCT
GGCAGTTTCCAACCTCCCTGGAGGTCATCTGGAGTTTCGGTGAAACCTGGGAAGAATGTGCTCAAAGGGAAACCTGG
GAAGAAGCAGCTCTTCACCTGAAAAATGTTCACTTTGCCTCAGTTGTGAATTCTTTCATTGAGAAGGAGAATTAC
CATTATGTTACTATATTAATGAAAGGAGAAGTGGATGTGACTCATGATTAGAACCAAAGAATGTAGAGCCTGAA
AAAAATGAAAGTTGGGAGTGGGTTCCTTGGGAAGAACTACCTCCCCTGGACCAGCTTTTCTGGGGACTGCGTTGT
TTAAAGAACAAGGCTATGATCCATTAAAGAAGATCTGAACCATCTGGTGGGATACAAAGGAAATCATCTCTAG

GTGGCCGAGAAGATTTGATTTTCTTTAAAAAGACAAGAATAAGGTCTGGTTAGGGAATGAAAAATGTATACATTT
CGGAACAACCTCCATTTTATCTAAAAAGTTCTTGTGATTGCCAGTTTATTTGCAGTCTCTTAATGTATCCCCAC
TCTTTCAGCCAGTACTTGAGAAAATTTTCTGAAATATGTCATTGAATTGTATTCCAGACACAGAATACATGATA
AATACTGATATTATGGGTAATCTGCTTTCCATATTTACCTATGATATTTACTGTGCAGTTTGTCACTACTAGCTT
GCATGGAGTAGGATGCAGTCAAATTTGCCTTAGTGTCTGTTCAAATAGAGACCTGAATTCAAATATTGTAGTT
TAGGTTCAAACAGAGTATGGCTGTTGCAAAATTTACCAAATTTGTTGATTACCTCTTTTATTAAAGAAATGTTGG
GGAGAGGGTAATATATTGTGACAATTTTGCAACTTACAGGGAATAGGACAGGTCATTAGGGTGTATTTCCCAGG
TTTCCAATTGAGAATCTAAACCAAGAGAAGTGAGACAAACCATCTAATATCTGTATCATGCTATTAATAGGCTGT
GATGTTGAGTTTCTCACTTACTCTTTCTGAGGTCCAGGGTCCTTATATGAAGAGATTCATATATATGAAGAGATT
CGTCTAGAGCAGTGGTTGTCAAAGTGTGGTCTGGGGGGGCCTCAAGAGCCTTTCAAGGGTATTCTAGGTCAAAGC
TGTTTTTATAACACTAAGACATTATTTCACTATTTATAGCTTTTCTTTTTTTTTTTTATTGAGAAGGAGTCTTGCTC
TGTTGCCACATTGGAGTGCAGTGGCAGCATCTCAGCTCATTGCAGCCTCCGCCACCTGGGTTCAAGCAATTCTC
CTACCTCAGCTTCCCGAGTAGCTGGGATTATAGGCACCCACCACCACACCTGGCTAATTTTTGTATTTTATAGTGG
AGACGGGGTTTACCATGTTGGCCAGGCTGGTCTGGAACCTCCTGAGCTCAAGTGATCTGCCCATCTCAGCCTCCC
AAAGTGCTGGGATTACAGGTATGAGCCACAACGCCAGCCATCATTTATCTTTTTCACTCATTTTTTCATGAGTA
TGCAGAGGAGTTTTCAAGAGGCTATCTGGTGTGATATTGTAATAGGCTGAATGCAAAAGCAGATACAAGATTCCA
GCTTTCGTCTGTCATCAGACATTGAAGAGATTGGAGAAATGTAAAGCAGCAGTACTCTTCTACTAATTTTTAT
TGTGGTTAGTTAGAAAAATGGTTATTTTTAGTGGTTTTAATATGTGAAAAAATAAAATTAGCTATTTGCC

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FIGURE 1054

MTASAQPRGRRPGVGVGVVVTSCKHPRCVLLGKRKGSVGAGSFQLPGGHLEFGETWEECAQRETWEEAALHLKNV
HFASVVNSFIEKENYHYVTILMKGEVDVTHDSEPKNVEPEKNESWEWVPWEELPPLDQLFWGLRCLKEQGYDPFK
EDLNHLVGYKGNHL

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FIGURE 1055

GCCCCCGCGCCCCGACCGAGCCCGGCTCGGGCAGCCACTCACCGGTGTCCCCGTCCGCGTCCTTCCTCCCCGG
GTCCCGGCC**ATG**GCGCTGAGTGAACCCATCCTGCCGTCTTCTCCACTTTCGCCAGCCCGTGCCGCGAGCGCGGC
CTGCAGGAGCGCTGGCCGCGCGCCGAACCCGAGTCCGGCGGCACCGACGACGACCTCAACAGCGTGCTGGACTTC
ATCCTGTCCATGGGGCTGGATGGCCTGGGCGCCGAGGCCGCCCGGAGCCGCCGCCGCCGCCGCCGCCGCCCTGCG
TTCTATTACCCCGAACCCGGCGCGCCCCGCCCTACAGCGCCCCCGCGGGTGGCCTGGTGTCTGAGCTGCTGCGA
CCCGAGCTGGATGCGCCGCTGGGGCCCGCACTGCACGGCCGCTTTCGTGTGGCGCCGCCCGGCCCGCTGGTCAAG
GCCGAGCCCCCTGAAGCGGACGGCGGGCGGCGGTACGGCTGCGCCCCCGGGCTGACCCGTGGACCGCGCGGCCTC
AAGCGCGAGGGCGCCCCGGGCCCCGGCGGCTTCGTGCATGCGAGGTCCCGGGGGCGCCCCCGCCGCCGCCGAC
ACACCGCCGCTCAGCCCCGACGGCCCCGCGCGCTGCCCGCGCCCGGTCCGCGCGCTCCTTCCCGCCGCTTTC
GGTGGCCCTGGTTTTCGGCGCGCCCGGGCCCCGGCTGCATTACGCGCCGCTGCGCCCCAGCCTTCGGTCTCTTC
GACGACGCGGGCGCCGCCGCGGGCAGCCCTGGGCTGGCGCCCCCGCCGCCCGCGGTCTCCTCAGCCGCTGCG
TCCCCGCTGGAGCTGTGGAGGCCAAGCCAAAGCGCGGCCGCGCTCTTGGCCCCGAAACGCACCGCCACTCAC
ACCTGCAGCTACGCGGGCTGCGGCAAGACCTACACCAAGAGTTCGCATCTGAAGGCGCATCTGCGCACGCACACA
GGTGAGAAGCCCTACCACTGCAACTGGGACGGCTGCGGCTGGAAGTTTGC GCGCTCAGACGAGCTCACGCGCCAC
TACCGAAAGCACACGGGCCACCGGCCATTCCAGTGCCATCTGTGCGATCGTGCTTTTCGCGCTCCGATCACCTG
GCGCTGCACATGAAACGGCACATG**TAG**CCGGGACGCCCCCGCCACCTGCGGCGGGCCGTGGCGGGTCCCACGCG
CCGGGCGCGGCCCTCCCAAATGTGACTGGTATTTATTGGACCCAGAGAACCGGGCCGGGCACAGCGTGGCTA
CAGAGGGTCTCCCTCGATGACGACGACGACGACGCCACCACCCAGCCCCGTCTGTGACTGAAGGCCCGGTGGG
AAAAGACCACGATCCTCCTTGACGAGTTTTGTTTTTCAAATGGTGCAATAATTTAAGTGGCATCTTCTCTCCCA
CCGGGTCTACACTAGAGGATCGAGGCTTGTGATGCCTTGTGAGAAATAAGGGCCTTAATTTGTACTGTCTGCGGC
ATTTTTTATAATATTGTATATAGTGAAGTACAAATATTGTATTACTGTACATAGAGAGACAGGTGGGCATTTTTG
GGCTACCTGGTTCGTTTTTTATAAGATTTTGCTGGGTGGTTTTTTTTTTAATTAAAAAGTTTTGCATCTTTT

1165/1629
FIGURE 1056

MALSEPILPSFSTFASPCRERGLQERWPRAEPESGGTDDDLNSVLDFILSMGLDGLGAEAAPEPPPPPPPPAFYY
PEPGAPPPYSAPAGGLVSELLRPELDAPI LGPALHGRFLLAPPGRLVKAEPPEADGGGGYGCA PGLTRGPRGLKRE
GAPGPAASCMRGP GGRPPPPPDTPPLSPDGPARLPAPGPRASFPPPFGGPGFGAPGPGLHYAPPAPPAFGLFDDA
AAAAAALGLAPPAARGLLTPPASPLELLEAKPKRGRRSWPRKRTATHTCSYAGCGKTYTKSSHLKAHLRTHTGEK
PYHCNWDGCGWKFARSDELTRHYRKHTGHRPFQCHLCDRAFSRSDHLALHMKRHM

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FIGURE 1057

CGGAATTGGTGGGTTCTTGGTCTCACTGAGTTCTAGAAATGAAGCTGCAGACCCCTCGCAGTGAGTGTTACAGCTCT
TAAGGCTCTCTGACTGCCACCCCTGCCTGCCTGCCCCGGCCCTGCACAACATGCAGCCCTCCGGCCTCGAGGGTCC
CGGCACGTTTGGTCGGTGGCCTCTGCTGAGTCTGCTGCTCCTGCTGCTGCTGCTCCAGCCTGTAACCTGTGCCTA
CACCACGCCAGGCCCCCCCCAGAGCCCTCACCACGCTGGGCGCCCCCAGAGCCCACACCATGCCGGGCACCTACGC
TCCCTCGACCACACTCAGTAGTCCCAGCACCCAGGGCCTGCAAGAGCAGGCACGGGGCCCTGATGCGGGACTTCCC
GCTCGTGGACGGCCACAACGACCTGCCCCCTGGTCCTAAGGCAGGTTTACCAGAAAGGGCTACAGGATGTTAACCT
GCGCAATTTTACGTACGGCCAGACCAGCCTGGACAGGCTTAGAGATGGCCTCGTGGGCGCCCAGTTCTGGTCAGC
CTATGTGCCATGCCAGACCCAGGACCGGGATGCCCTGCGCCTCACCCCTGGAGCAGATTGACCTCATACGCCGCAT
GTGTGCCTCCTATTCTGAGCTGGAGCTTGTGACCTCGGCTAAAGCTCTGAACGACACTCAGAAATTGGCCTGCCT
CATCGGTGTAGAGGGTGGCCACTCGCTGGACAATAGCCTCTCCATCTTACGTACCTTCTACATGCTGGGAGTGCG
CTACCTGACGCTCACCCACACCTGCAACACACCCTGGGCAGAGAGCTCCGCTAAGGGCGTCCACTCCTTCTACAA
CAACATCAGCGGGCTGACTGACTTTGGTGAGAAGGTGGTGGCAGAAATGAACCGCCTGGGGCATGATGGTAGACTT
ATCCCATGTCTCAGATGCTGTGGCACGGCGGGCCCTGGAAGTGTACAGGCACCTGTGATCTTCTCCCACTCGGC
TGCCCCGGGGTGTGTGCAACAGTGCTCGGAATGTTCTGATGACATCCTGCAGCTTCTGAAGAAGAACGGTGGCGT
CGTGATGGTGTCTTTGTCCATGGGAGTAATACAGTGCAACCCATCAGCCAATGTGTCCACTGTGGCAGATCACTT
CGACCACATCAAGGCTGTCAATTGGATCCAAGTTTCATCGGGATTGGTGGAGATTATGATGGGGCCGGCAAATTCCC
TCAGGGGCTGGAAGACGTGTCCACATACCCGGTCCTGATAGAGGAGTTGCTGAGTCGTGGCTGGAGTGAGGAAGA
GCTTCAGGGTGTCTTTCGTGAAACCTGCTGCGGGTCTTCAGACAAGTGAAAAGGTACAGGAAGAAAACAAATG
GCAAAGCCCCCTGGAGGACAAGTTCCCGGATGAGCAGCTGAGCAGTTCTGCCACTCCGACCTCTCACGTCTGCG
TCAGAGACAGAGTCTGACTTCAGGCCAGGAACCTCACTGAGATTCCCATACTGGACAGCCAAGTTACCAGCCAA
GTGGTCAGTCTCAGAGTCTCCCCCACATGGCCCCAGTCCTTGCAGTTGTGGCCACCTTCCAGTCCTTATTCT
GTGGCTCTTGATGACCCAGTTAGTCCTGCCAGATGTCACTGTAGCAAGCCACAGACACCCACAAAGTTCCCTGT
TGTGCAGGCACAAATATTTCTTGAAATAAATGTTTTGGACATAGAAAAA

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FIGURE 1058

MQPSGLEPGTFRWPLLSLLLLLLLLLQPVTCAYTTPGPPRALTTLGAPRAHTMPGTYPSTTLSSPSTQGLQEQ
ARALMRDFPLVDGHNDLPLVLRQVYQKGLQDVNLRNFSYGQTSLDRLRDGLVGAQFWSAYVPCQTQDRDALRLTL
EQIDLIRMCASYSELELVTSAKALNDTQKLACLIGVEGGHSLDNSLSILRTFYMLGVRYLTLTHTCNTPWAESS
AKGVHSFYNNISGLTDFGEKVVAEMNRLGMMVDLSHVSDAVARRALEVSQAPVIFSHSAARGVCNSARNVPDDIL
QLLKKNGGVVMVSLSMGVQCNP SANVSTVADHFDHIKAVIGSKFIGIGGDYDGAGKFPQGLEDVSTYPVLIEEL
LSRGWSEEEELQGVLRGNLLRVFRQVEKVQEENKWQSPLEDKFPDEQLSSSCHSDLSRLRQRQSLTSGQELTEIPI
HWTAKLPAKWSVSESSPHMAPVLAVVATFPVLILWL

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FIGURE 1059

TATTTTGTGATGTGTTGAACCTCGATTAAAGATTGCATTATGACATTCTTGAAGACCGAGTTCCATCAGGACTT
ATTGTTGACTACCACAATCTGTTGTCTCAATGTGAGGAGAGTTACAGGAAATTTTAAATCTGAGAAGCAGTTTG
TCAAATTGTAACCTGACTCCGAGCAGGAAAATATCTCCATGGTGGAAGGGTTAAATTTGTATTTCGGAGATGGAA
CAGTTGAAACAAAAGCTGAAACTCATTGAGAATCCTTTGTTGAGGTATGTGTTTGGTTATCAGAAGAATTCTAAC
ATCCAAGCAAAGGGTGTCCGTTCCAGCGGTGAGAAGATCACTCATGTGGTCTCCTCCACCATGATGGCTGGTCTC
CTGCGGTCCCTGCTTACGGACAGGCTTTGCCAGGAGCCTGGTGAGGAAGAAAGAGAAATTCAGTTCCATAGTGAT
CCATTGTCTGCTATAAATGCCTGCTTCGAAGGTGACACTGTTATTGTTTGTCTGGCCATTATGTGGTACATGGC
ACTTTCTCCATTGCTGACTCCATTGAGTTGGAGGATATGGCCTACCAGATGACATTGTGATAGAAAAGAGGGGC
AAAGGCGACACTTTTGTGGACTGCACTGGTGTGATATTAAATCTCAGGCATAAGATTTGTTTCAGCATGATGCT
GTAGAGGGAATCTTAATTGCTCACCGTGGTAAGACTACGCTGGAAGAACTGTGTGCTGCAGTGTGAGACGACCGGA
GTCACAGTGGCGACATCAGCAGAGTTTCTAATGAAGAACTCGGATTTATATGGCGCCAAGGGTGTGGTATAGAA
ATCTACCCTGGGAGTCAGTGCACCCCTGAGTGACAATGGGATCCATCACTGCAAGGAAGGGATCCTCATTAAAGGAC
TTCTTAGATGAACATTATGACATTCCCAAGATATCCATGGTGAATAATATAATACATAAATGAAGGTTATGGT
GTTGTCTTGGTGAAACCTACAATCTTCTCTGACCTGCAAGAAAATGCTGAAGATGGAACGAAGAAAATAAAGCG
CTTAAATTCAGACAAGTGGAGAGCCAGATGTGGCTGAAAGAGTGGATCTAGAAGAGCTGATTGAGTGTGCAACT
GGTAAATGGAGCTTTGTGCAAGAACTGACCCCTCTGAGCAAGTGGAGGGAAATTTGTGAAATTGTAAATGAACCTA
ATTGCTGCCTCCACACAGAAAGGCCAGATAAAGAAGAAAAGGTTGAGTGAAGTGGGGATCACGCAAGCTGATGAC
AACTTAATGTCACAGGAGATGTTTGTGGGATTGTGGGGAACCAAGTTCAGTGGAAATGGGAAAGGTAGTTTGGC
ACATTTCTTTTCTGACTACAGTGAAGTAGATAGCAAAATACTGGATTTTGCACATGCTGCCCTAAGAATCA
CTGCTGCCATTGTAGTTTGTCTGTATTGTCTGTATTTTATATTTGATTATTTGGGCTTGAGTGAAGGTAGATTTA
TTTCCATTTCAGAGTGTGTCACATAAAACACTCCCTCTTTATAAGAAAAATCATAAATGCATATAAAATAGAAAA
TATTTGGAGATTGCTTATCTGAAAGTCTTGCTTTCTTATACACATGGTTCTCTCATATTAAGCCTGGTGGTTACT
TTTTAGTGTAATTACCTTTAGCACTTCAAAGACGAGGAAGTAAGGAAGGGAATGCAAGACTAGTGCATAAAAAATG
CAATAGGTGTCATATGTACAGCATTCTTCTTAGAGTTGCCTTTTCATCCCAATTACAGTGAAGTCTGATTTCCATC
CTGTATTTGCATAAATACTTGTCTTAAATAAAAGCTTTTATGATTGGGAATTTATCTGCCTAATCAGACTTATTA
TTGAGACGTCAATGGGACGCATTTTTCTGTTGAGCTATGCAGTCGTCAAACAGCGATAGACAGCATAGGAGGTT
TGAAGCAGAAATGAAATGTGTTATTTCAGAGCCAATGTTGTACATAGAGCATTTTCACTATTGCTGAATGGGAATG
ATTAACAAACAGGTATTTTTCGGGCCAGGCGGTGGCTCACGCTTGTAAATCGCAGCACTTTGGGAGGCTGAGGCAG
GAGGATCACTTGAGCCCAGGAGTTCAAGACTAGCCTAGGCAACATAGTGAGACCCTGTCTCTACTAAAAATAAAT
TTAAAAAAATTAGCTGAGTGTGGTGGTGCATGCATGTAGTTCCAGCTACTCAGGAGGCTGAGGCTAGAGGATCC
TTGAGCCCAGGAGGTTGAGGCTGCAGTGAGGTGTGATTGCGCCACTGCATTCCAGCTTGGGCGACAGAGCGAGAC
CCAGTCTCAAAAAAAAAAAAAAGTATTTTTCTCTTACCGTTACAGTATTCTGATTATATTACTGACACAGTCAA
AATGATTAACTGTACAACCTGTATCTGCTGGGTGTTCTTGTATCATATTGTAAAACAGCTTTAAAAATATTTAT
ATTTTAAAACTGTATGTGACATTAATATGCCTAATGATTAAAATTATAGTGATGAAATAAAAAAAAAAAAAAA
AAAAA

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FIGURE 1060

MVEGLKLYSEMEQLKQKLKIENPLLRVFGYQKNSNIQAKGVRSSGQKITHVVSSTMMAGLLRSLLTDRLCQEP
GEEEREIQFHSDPLSAINACFEGDTVIVCPGHYVVHGTFSIADSIIELEGYGLPDDIVIEKRGKGDTFVDCTGADI
KISGIRFVQHDAVEGILIAHRGKTTLENCVLQCETTGVTVRTSAEFLMKNSDLYGAKGAGIEIYPGSQCTLSDNG
IHHCKEGILIKDFLDEHYDIPKISMVNNIIHNNEGYGVVLVKPTIFS DLQENAEDGTEENKALKIQTSGE PDVAE
RVDLEELIECATGKMELCARTDPSEQVEGNCEIVNELIAASTQKGQIKKKRLSELGITQADDNLMSQEMFVGIVG
NQFKWNGKGSFGTFLF

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FIGURE 1061A

TTGGGAAACCCCTACCTGTCTGTACCTGTAGGTCTTTTCTCTGGGGTCTGGAAGAAGAATCCTTCAATATCTTGC
CTTCTGGTAATCTGAGAGCAGGGCGAGAAAAGGAAGATCAGAGTTCCACCCTTAAATCTGTAGGTTTTCACTCCC
CCACTCTCCTTTGACAGTCCCGTGGAGTCTCCATCTGAGCCCTTTCCTAGTCCAGGCATCCCGATGTTGGTGGATG
GCCCATCTGAGCGGCCAGCCCTGTGCTTCTTGCTGTTGGCTGTGGCAATGTCTTCTTCGGCTCAGCTCTATCCA
TAGATGAAACACGGGCGCATCTGTTGTTGAAAGAAAAGATGATGCGGCTCGGGGGCGGCTGGTGCTGAACACCA
AGGAGGAGCTGGCCAATGAGAGGCTCATGACGCTCAAAATCGCTGAGATGAAGGAGGCCATGAGGACCCTGATAT
TCCCACCCAGCATGCACTTTTTCCAGGCCAAGCATCTCATTGAGAGAAGTCAAGTGTTTAATATTCTAAGGATGA
TGCCAAAAGGGGCTGCCTTGCACCTCCATGACATTGGCATCGTGACTATGGACTGGCTGGTGAGGAATGTCACCT
ACAGGCCTCACTGCCACATCTGTTTACCCCAAGGGGGATCATGCAGTTCAGATTGCTCACCCAACCTCCCGCTC
CATCAGAAAAATGTTCCAAGTGGATTCTGCTGGAGGATTATCGGAAGCGGGTGACAGAACGTCAGTGGTTGATG
ACAGCTTGCTGAGGAATTTCACTCTGGTGACCCAGCACCCGGAGGTGATTTACACAAACCAAAATGTTGTCTGGT
CGAAATTTGAAACCATCTTCTTACCATCTCTGGTCTCATCCATTACGCACCAGTGTTTCAAGACTATGTCTTCC
GGAGCATGCAGGAGTTCTACGAGGACAACGTGCTCTACATGGAGATCAGAGCCAGGCTGCTGCCGGTGTATGAGC
TCAGTGAGAGACCATGACGAAGAGTGGTCAGTGAAGACTTACCAGGAAGTAGCTCAGAAGTTTGTGGAAACTC
ACCCTGAGTTTATTGGAATCAAAATCATTTATTTCGGATCACAGATCCAAAGATGTGGCTGTCTCGCAGAATCCA
TCCGAATGGCCATGGGGCTCCGAATCAAGTTCCCCACGGTGGTGGCAGGGTTTGACCTGGTGGGGCATGAGGACA
CTGGCCACTCCTTGCGTGACTACAAGGAAGCTCTGATGATCCCCGCCAAGGATGGCGTTAAGCTGCCTTACTTCT
TCCACGCCCGGAGAAACAGACTGGCAGGGTACTTCCATAGACAGGAACATTCTGGATGCTCTGATGCTGAACACTA
CCAGAATCGGCCATGGATTTGCTTTGAGCAAACACCCCGCAGTCAGGACTTACTCCTGGAAAAAGGACATCCCCA
TAGAAGTCTGTCCCATCTCTAACCAGGTGCTGAAACTGGTGTCTGACTTGAGGAACCACCCTGTAGCCACTCTGA
TGGCCACTGGGCACCCCATGGTGATCAGCTCTGATGACCCAGCTATGTTTGGTGCCAAAGGCTTGTCTATGATT
TCTATGAGGTCTTCATGGGCATTGGGGGGATGAAGGCTGACCTGAGGACCCTCAAACAGCTGGCCATGAACCTCTA
TCAAGTACAGTACCCTGTTGGAGAGTGAGAAAAATACTTTTATGGAATCTGGAAGAAGAGATGGGATAAGTTCA
TAGCAGATGTGGCTACAAAGTGAGGAGAAGCTAGCCAGCCCTCTACAAGCTGTCTTCTTGACACGCTGTCACTT
CCTCTCACTCGTCTTGAATCAGCTCCATGTGCCCATGAAATCAATGGCCTCTGTATGGAGCGACCCTGTGAGAA
GCACTTGGCTGGCTGAGCAAATTCATCCTCTGGAATATTCTCTCTCAGCCACAGTGACATTGACCCTCTTGGTT
TTCTCCTCTCTCTGGCCATTTCTTCCAGTTTTCCCTATTTTCAAGTCTTCTCCTCTCTCTGATCTCTGTGCTGTTT
CCTCAGGACTCAGTCTGGGCTCTCTTCTATTCTGGTCTCTTTATTTTTTTATTTTTTGTATTTTTTCGAGATGGA
GTTTTGCTCTTGTGCCCAGGCTGGAGTACAATGGTGCATCTCAGCTCAGTGCAACCTCCGCCACCCGGGTTCA
GGCAATTTCTTGCATCAGCCTCCCGAGTAGTTGGAATTATAGGCATGTGCCACCACACCCAGCTGATTTTTTGCA
TTTTTAGTAGAGACAGGTTTTTACCATGTTGGCGAGCTGGTATCCAACCTTTGACCTCAGGTGATCCACTCGCCC
CTTGGCTCCCAAAGTGCTGGAATTACAGGCGTTAGCCACCATGCTTGGCCTATTCTGGTCTCTTTAACTCTCTCC
TCTTTATTTCTCTCTCTCTCTGTACACTTTTCTGGGTGGTCTCATCCATTCTTTGCTTTTTTCATACCATTTA
TTTGTTAATGATTCCACATTTATTTATGCACCTGGAGAGCTCACAGGAATCTCAGAACTGATGAGGTACAATT
CTGAACCCCTCAGTCTCTTCCCTTTAAACCTTTCTTTTTCTCTACTTTAATTTTTCTAAAGAGTGTCTTGCTATGT
TGCCCAGGCTGGTCTCCAACCTCAAGTGATCCTCCTGCGCAGTCTCCCGAAGTGCTGGGATTACTGACATGAGCC
ACCACACTCAGCCCTTTAAACCTTTCCCTGGCCTTTCCCATAGCTGGTGAAGGACACCTCCATCCATTCCACGCA
GTTGCTCAAAGCAGAAATTTTCAAGTGAAGTCTTGATGCTGCGCCGTCCCCACTCCCTACATCAGAACGCATCC
CTCATCTGGACTCCAGCGGTGGCTTCTTGATGCTGCGCGGTCCCCACTCCCTACATCAGAATGCATCCCGCATC
CAGACTCCAGCGGTGGTGCTCTACCTGCACGCTGTTGCCAAGTCCAAGTACCATACTCCTGCCTGAGCTATGAC
AACAGCCTCCTCACTGATCTCCCCTTTCTTCCCTTTGCCTCCTCCAGCTCATTTTTTACAGTGTAGAATGACATT
TTGTTTGTGTTTTGTTTTGTTTTGAGATGGAGTCTCGTTCTGTTGCCAGGGTGGAGTGCAGCGGTGCGATCTC
GGCTCACTGCAACTTCCACTCCCGGGTTCAAGCGGATTCTCGTGCCCTCAGCCTCCTGAGTAGCTGGGATTACAGG
CATGACCACCATGCCCGGATAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACTATGTTGGCCAGGCTGGTCT
CGAACACCTGACTTCGTGGTCCACCCGCCTTCGGCCTCCCAAAGCACTGGGATTACAGGCGTGAGCCACCCGGCC
TGGCCTAGAATGACTTTTTAAAGATCAAATTAATCAGGTCACTCCTTTGCTTACAACGCAGTGCGTTTAGAGGT
ACACCCCATGTCTCCACAGGGCATAACAGCATCCGATTTAATCTGGATCCATTCCGGCGCTTCTCTCCAGTCAC
CCAGAGGGCCCCAACCCCGCGGCCCTTTCTTCTCAAATGTCTCGGCTCTATACCGTGCTGGGTCTTTTTCTC

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FIGURE 1061B

TTTCTCTCTGCCTGGAACATTCTTTCTTTCCCTTTTGTCTTGCCCACTCCTGTTTACCCTTCAAGTTTCAAGTT
CATGTCACTGTCTCAGAGAGGTTTTCTGTGCTCGCCCTGTTTCTCTCAGGAAGCCTTGCTCTTTTCCATCATGC
CTCTAATCACAGCTTATAATCGGATATTTATTTCTGTGTCTACAGTCTTGCCCTGCCAGACTGTAAGCCCCATGT
GGGCAGGCGCTCATGATTGTTTCTGATTGTTTCACGCATGCTGCTAACCCAGAGCCTGGGCCCAAAGCTAGTTAG
TACTCAATAAACAATGCATTGAAAAAAAAAAAAAAAAAXTA

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FIGURE 1062

MLVDGPSPALCFLLLVAMSFFGSALSIDETRAHLLLKEKMMRLGGRLVLNTKEELANERLMTLKIAEMKEAM
RTLIFPPSMHFFQAKHLIERSQVFNILRMMPKGAALHLHDIGIVTMDWLVRNVITYRPHCHICFTPRGIMQFRFAH
PTPRPSEKCSKWILLEDYRKRQNVTEFDDSLRNFTLVTQHPEVIYTNQNVVWSKFETIFFTISGLIHYAPVFR
DYVFRSMQEFYEDNVLYMEIRARLLPVYELSGEHHDEEWSVKTYQEVAQKFVETHPEFIGIKI IYSDHRSKDVAV
IAESIRMAMGLRIKFPTVVAGFDLVGHEDTGHSLRDYKEALMIPAKDGVKLPYFFHAGETDWQGTSIDRNILDAL
MLNTRIGHGFALSKHPAVRTYSWKDIPIEVCPISNQVLKLVSDLRNHPVATLMATGHMPVISSDDPAMFGAKG
LSYDFYEVFMGIGMKADLRTLKQLAMNSIKYSTLLESEKNTFMEIWKKRWDFIADVATK

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FIGURE 1063

CCAAGCTCCAGCTGTTTGTCAAGGCGAGTGAGGACGGGGAGAGCGTGGGTCACTGCCCCTCCTGCCAGCGGTCTT
CATGGTCCCTGCTCCTCAAGGGCGTACCTTTACCCCTACCACGGTGGACACGCGCAGGTCCCCGGACGTGCTGAA
GGACTTCGCCCCCGGCTCGCAGCTGCCCATCCTGCTCTATGACAGCGACGCCAAGACAGACACGCTGCAGATCGA
GGACTTTCTGGAGGAGACGCTGGGGCCGCCCCGACTTCCCCAGCCTGGCGCCTCGTTACAGGGAGTCCAACACCGC
CGGCAACGACGTTTTCCACAAGTTCTCCGCGTTCATCAAGAACCCGGTGCCCGCGCAGGACGAAGCCCTGTACCA
GCAGCTGCTGCGCGCCCTCGCCAGGCTGGACAGCTACCTGCGCGCGCCCTGGAGCACGAGCTGGCGGGGGAGCC
GCAGCTGCGCGAGTCCCGCCGCGCTTCCTGGACGGCGACAGGCTCACGCTGGCCGACTGCAGCCTCCTGCCCAA
GCTGCACATCGTCGACACGGTGTGCGCGCACTTCCGCCAGGCGCCCATCCCCGCGGAGCTGCGCGGGCGTACGCCG
CTACCTGGACAGCGCGATGCAGGAGAAAGAGTTCAAATACACGTGTCCGCACAGCGCCGAGATCCTGGCGGCCTA
CCGGCCCCGCGTGACCCCCGCTTAGCGCCCCACCCCGCGTCTGTGCCCCAATAAAGGCATCTTTGTGGGAAAAA
AA

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FIGURE 1064

MVLLKGVFFTLTTVDTRRSPDVLKDFAPGSQLPILLYDSDAKTDTLQIEDFLEETLGPPDFPSLAPRYRESNTA
GNDVFHKFSAFIKNPVPAQDEALYQQLLRALARLDSYLRAPLEHELAGEPQLRESRRRFLDGDRLTLADCSLLPK
LHIVDTVCAHFRQAPIPAELRGVRRYLD SAMQEKEFKYTCPHSAEILAAAYRPAVHPR

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FIGURE 1065

GGCACGAGGCACCTCGCTCGCAGCCTCCCCAGCGCAGCAGCCCGGCTGTGGGCCTGCGGCAGCCGGGTCTTCCTG
GTCCCCACCTCCTGGGGCCGACGGGCGGCAGGAAGGGGCTCGGCGGGACGCGCCGTGAGGGACCTGAGGAGGAAC
AACGGAACGCGTTTCGGAACGGCCTGGACTCCCGAGACTCACCCGACTCGTGGCCACACCGGGAGAACTGAAGCGG
CAGTAGCCGGCGGAGACGCCCCGACCCGAAGGCCGGCTGCTAGGGAGCAGACAGCTGAACCGCTTGCCAGACGCCG
AAACCCAGTGACGCCCTCCACCGCTCCACCGTGCTCCCGGCTCCCCGCCCCCGCGCCCGGGGCCCAAGGCGC
ATGCGCCGCTGTCTGGAGGGGCCCCATTTCCGTCCGTCTGTTGGGGGAGGCACAGTGAGTCCACTGGGGCACGGC
AGCGTCTAAGCCACAAGCCGAGCACATAAGCCAGGTCTTAACGGAGCCTATGTGTAAGTCCACTACTGGTGCAAG
GTTGCACACTTCTAAGAAGAGCGGCGTGGGGGGCTCGGCGACCTTCGCTTCAGTCGCTCCCCGTGCAGTCCCCCT
GTGCCCAAGACACAGCCTGATGCTTGTGCTCCGGTGGGCGGAGCTTGGAGGCGGCGGGAAGTGAATTGGTGGCT
TTGAAGGCGCGCGAGCGGGAACAGCTCTTGAGGAGTGAGACTGCAGGAGATGTGGGCCGTGCCAAAGAGATGGA
TGAGACTGTTGCTGAGTTCATCAAGAGGACCATCTTGAAAAATCCCCATGAATGAAGTGAACAATCCTGAAGGC
CTGGGATTTTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTGTAGTTCAGCACTT
GATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAGACATCATTTATATGCAATTTCA
TCAGCACCAGAAAAGTTTGGGATGTTTTTCAGATGAGTAAAGGACCAGGTGAAGATGTTGACCTTTTTGATATGAA
ACAATTTAAAAATTCGTTCAAGAAAATCTTCAGAGAGCATTAATAATGTGACAGTCAGCTTCAGAGAACTGA
GGAGAATGCAGTCTGGATTGCAATTGCCTGGGGAACACAGTACACAAAGCCAAACAGTACAAACCTACCTACGT
GGTGTACTACTCCAGACTCCGTACGCCTTCACGTCTCTCCATGCTGAGGCGCAATACACCGCTTCTGGGTCA
GGAGTTAGAAGCTACTGGGAAAATCTACCTCCGACAAGAGGAGATCATTTTAGATATTACCGAAATGAAGAAAGC
TTGCAATTAGTGAACATGAAAGGAAAATAAAAAATTCCTCACAGTCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1066

MDETVAEFIKRTILKIPMNELTTILKAWDFLSENQLQTVNFRQRKESVVQHLLHLCEEKRASISDAALLDIIYMQ
FHQHQQVWDVFQMSKGPGEVDLFDKQFKNSFKKILQRALKNVTVSFRETEENAVWIRIAWGTQYTKPNQYKPT
YVYYYSQTPYAFTSSSMLRRNTPLLGOELEATGKIYLRQEEIILDITEMKKACN

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FIGURE 1067

GTTTTTGTGCAGGAACAGCCCCTCCCGTCTTTGTCCTGGCGGTGAGCACCCAGGGCTAAGCTTTTGAACACTTTC
TTTGTGTTTGGATTGAGCCAGGCAATGCATATTTGCTTTCATTTCTTCTTGAGCTTGAGGAGCTCCTGGGTGCA
AATCTTGGAAAATGAGGATCTCTGAGCCTTTCCAGGCCAGCTCTTTGTTTTGTAGCAGACAATTGAGGCTTTGAA
AAGGAAAGTGGGTGGGGGCACCCACAGGTGGCCCTCATCACCCAATTGCCAGTGCCTGCAGGCTGCTTCAGCAG
AGGCCCAGAGTCAAAGAGGACTTAAACACAGCTGTCTGTTTCTCCCTTAGCTTCTGTGTATGAGAGAAACGACTTC
TGTTTTTCAAAGTAAGAACAAGGAGGAATTTGTTTCTAAAAGAACATTAAAAACACAGGCTCGTGGTCTAAAAGCA
AATGGTTCAGCAGGATGTTTCAGGGCCTTAAAGCACAGTCAGCAGGACTCAGCATCTCCCAGCACCTGCTCTCCGG
TTGTTCATGGTAACATCATCCCCAACCAACACCTTGTCCAGCCGAGAGACAGCAATCATAAGGAGGGACCTCGG
TTTCCCCCGAGGATCCTGGGCTTCCTTTCTGAAACGCTTGCTTCTGAGCTCAGCAACCAGGAACACCAGGCCAGC
CCATCCCCAGCACCTCTGTGGAGATGAGGGACAAAGTCTACAGTCCCTCTTCTGTTCTGATGAGAAAGGGAGG
GAAGAAAAACATACCCCGAGCGCCTGCAATATGGTCATGACACTTTCAAAAAAGCCTGTGCTATGGAGTCATGATCA
GAAACCAGAGTGTGGAGAGGGTCAGCAGCCTGCCTCAGAGCAGCCAGCTAGGCGGGGAGTGGTAAATTTGGGACT
TGTACCCAGGCATGACTGGCTCCGAGCCCAGTGCTCCACTCTATGGAATGTTCCCTGGGCCTCAGTTGCTTTCTT
TTCTTTTGAGGCCGCGGGCTGCTGCCACTCTGGCAGCTGGTGAGTT**AG**CTGGAGGGCAACATTCCAAAGCAGGG
GCAGCATGCTGCTTTCTCTGTGCCACTCCTGCGGGGAAGTCCGTTGACTCCCACCGCTGAAGGGAGCTGGCA
ACACCAGGATGAGGTCCCAGGGGACGGGAGCAGGTACCCACTGTCTGTCTACCTTCCCCTGGAAGACCGGAC
AGGCCAGCCCTTGCGGGGGCAGGCAGAGGACAGAGTTGGCTTTGCGCGGTCTCTGCCTGCTGAGCAGTTCCAATT
CCTCTCATGGGAGAAACAAGGAGGCAGTCGCTTGTGCATGTTCCAGAAGTTTACTGGGGAGGAGGAAGCGGACA
GAGGAAGCTGTGTGTGCATGTGAAGGGGTGGGCAGGGTGGGAGGGATGCACGCGTATGTGAGCATAGCATGTGTG
AGTACTACACACATCTCCATGCAGAAGCACAACTGGGCAGCCCTGGCTTCCAGCTCTGGGCTTCAGCACAAACAGA
CACCAGCCTGTGGTCTCTCAGAAGCCAGGGAGACCACATCGGGCTCAGGACGTTTTACCCAAAGTCCAGAGTTTT
TATGCCTCTCCCTGGCATTCTCCATAAAGAAGGGAAGGTGAGATGACCCCTTAGATCTGTGTCTATCTGGGAATTT
CCTTGGGCTGGTTTAGACACGATGCCCTCTTTTTCTCAGGATAGCAGATAACCTGCTTTGAAAGAGGGCTTAATT
CTGTGGGTCTTAATTTTCTCCTTTCTCTCTCTCTCTCTGTGTGTGTGTGTGTGGGAAAATGGCAAGTTTCCAATA
CCAGCTTTGGAGGAACGATTACGTTTTCCCTCCAATTTCAAGTCCGAAAGACCAGAGCCCTCATTCCAAAGCCCC
CCACCCAGATGGATTTTTTCGTTTCATTTGTTCATCCGTCCCATGGGAGGGCCCCATGTCTCTCAGAACCCATCC
TGGAGGCAGCAGGTCGGGTAGAGTGAGTTTGGCCTGCTCATGACCTCCACCCCTGAGATTGTGAACAAGGATGTC
TGGGGCGATGCTGAGAATGTTTTGAAGCTGCTCCAGATGACGCTGATGATCACACCAGATTGAGTGCTGCGAT
CGCCTTGAGTCCAGCCTCTGCATAAACGAGGTTCTCATAAACAAAGTTCACTCTACCTAAGCTAAGTCTATGTGA
GCAAACCCACTTCATCCTTTGTACCTGGAGACCTGGTTACACTAACCTGATACTGACCTGTTTCATGTAGCTGGAA
TGGTGTGTTTTCATGCAAGTGTGGACCAAGCAATGGCATGGGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT
TGTTTGTGTATGCGTTCACACTTGTGTGTGTATATGTGCATGTAGATGCTGCATAAATGATTTTTGATGTCAAAG
ACAAACACATTCCATTGTTTTAAATATTCTATTATGTAAACAATACGCAGAGGGACCATACTACTCTTGTTCATA
TTATTTGTGATGGTAAACATGCATTTGCAATAAATTAAGCTTTCTGGGAAGGCAAGCAGTATTGGAGCCAAACG
ACTGTCTCGGAACATGTGTGTGTTATCTCGGTTTCATATCAAGTCCAAAGCTAATGGAGCCTTCCCCGCCATCCAG
GGAGGAACACCAGGACCCCGGAGTTTCTTCTTAGTGCTATATTTTAAAGTTGCATTGACGTTTTCTCCCTTCC
TTTTGTGCAAGTTGGAAGTAGCAGTGTTCTAAAAGATGGTTTGACGTTTTTGCTGTTGTTTTATGTTTTTAAAAA
TGTATCTGCTTTGTGTTTGGAAATAAAAATCTCTATTTTGGTCTATGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1068

MVQQDVQGLKAQSAGLSISQHLLSGCHGNIIPNPTTLSSRETAIIRRD LGFPRGSWASFLKRLLLSSATRNT RPA
HPQHLCGDEGQSPTVPLPVLMRKGGKKTYP ER LQYGHDTFKKPV LWSHDQKPECGE GQQPASEQPARRGVVNLGL
VERHDWLR AQCSTLWNVPWASVAFLSFAGRGLLPLWQLVS

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FIGURE 1069

GCCGCGGAGAAGGAGCCGGACCCCTTGGGCGGAGCGCCCAATGTGTGGTCCCTCACGCCGTCCCGCACCTTGCTT
TTTAGGGTTCTTTTCCGCTTTCTGAGCCCTTTTATACCTTACGTTTAGAAGGGGAAAATCATCCTCCACACCT
TCTCCCCGACTTTTTCCTTTTGTCTTGAAGTTACCCAAAGGCCTGTGTATTGTTCTCAATGGTCCCAAGAAT
TACTCTAATATAGTTGTTTTCTGAGGGAGGATGGATGGAGATAACTATCCTGATCCCAATGTCACTTTTTAAGG
CATTGCTTCAAGAGACAAGCAGTTTGAATCAGGCAGAACTGGATTGCAAAATTTATGGGCAGACCGAGAAAAT
GCTGCTGTGAAGACCCAATTAAAGCTTTCACATAAATGAAGCTACAGCTATCATGATTTAGTGCCCCCAAAGGA
AGAACTTCAGTGACAAAGAAAGGACATTTCTGGGGGTAGTAGAATGCTTGAGGCCTGGAATTTAAACCTGAGCCA
CTATCTGAAGGTTTAAATATATCTTTGCCAAGTCCAAGGGTACAAAGATTTTCTCCTGTGTTTTCTTCTAGAAGTT
TTATCATTTGATAGTCTGTGATCCATTTCAAGTTGATTTGCTATCTGGTGTGAGCTATTAAATAATAGAAGAAAA
TGGAATTGAATATGATGTCAGCATGGAACAATCTAATGATTCATTAAGAGTCAACCATAATGACGGTGAAGAGTC
AAAAACCAGTGCTCAAGTATTTGAGCATCTAATCTGTATGGACTCCAGGGATTCTTCCTTTGGACAAAATGATTC
TCCTACAGTTTTTGGCCATCACTACTCGTGAAGCAAATAATTCACTCATATCACAGAATATACCAGGGCCCCCTGAC
TCAGACACAGACTCTTTCTGCAGAGCAATTCCATCTAGTGGACCAAAATGGGCAGGCTATTCAATATGAACCTCA
GTCATTGGGGGAATCCAATGCACAAATGATGATCGTTGCCAGCCCAACAGAAAATGGACAGGTACTTCGTGTAAT
TCCACCTACCCAGACAGGAATGGCACAAGTGATTATACCTCAGGGGCAACTTGTTGGATGTGAATAGTCTCGGGA
TGTCCCTGAAGAGAAACCCAGTAACAGAACTTACCAACTGTAAGAGTGGATACTCTAGCAGACAATACCAGCAA
TTACATTCTTCATCCTCAAACATCCTTCCCATTTGCCCAAAAAGTCAGTGACCGGAATGCTGGAAGAACCCTTCT
GGGGCCTCTTCAGCCACTTTCTTCTAATACACCTATATGGGCCTGCCGTCTTAGGAGCTGTGAGAAAATTGGAGA
TTCATACCGTGGCTACTGTGTAAGTGAGACTGAATTAGAAAGTGTCTAACATTTTACAAGCAGCAACACAGAG
TGTTTGGGGGACCCGTCAGTCTCCAAGCCCAGCCAAGCCTGCTACACGCTTGATGTGGAATCCAGTATGTTCC
ATATGATGGAATCCCATTTGTTAATGCAGGGAGTAGAGCTGTGGTAATGGAGTGTGAGTATGGGCCAAGAAGAAA
AGGTTTCCAGTTAAAAAAGTCAGTGAGCAGGAAAGCAGGTCTTGTGAGCTCTACAAAGCCACTTGTCCAGCTCG
GATTTACATTAAAAAGGTACAGAAGTTTCTGAATATAGAGTTCTACAGACCCCAAAATTGACAAGAAAATTAT
CAGAATGGAGCAGGAGAAAGCTTTTAAATGCTAAAGAAGAACTTGGTAGATGCTGGTGGTGTCTTAGGTGGTA
TGTACAGTTACCTACACAGCAAGCTCATCAGTATCATGAATTAGAGACTCCCTGCCTCACTTTGTACCTTCTCC
TTTTCTGTGCTTCTCTTGAAGAAGAGGAACTGCAGTTAGAGATGAGAATTGTGCATTACCCTCACGTTTACA
TCCTCAAGTAGCACATAAGATTCAAGAATTAGTATCACAGGGAATAGAACAAAGTGTATGCAGTAAGGAAACAGCT
AAGAAAATTTGTGGAAAGGGAAGTGTCAAACCCGATGAGGTACCTGAAAGACATAATTTATCTTTTTTTTCCAAC
TGTAATGATATAAAAATCACATCCATGAGGTACAGAAATCCTTGAGAAATGGAGATACGGTATATAACTCAGA
GATTATTCCAGCAACGCTTCAATGGACTACAGACAGTGGGAATATTCTCAAAGAGACCATGACAGTTACATTTGC
AGAAGGAAAATTCACCAGGAGAATCAATTACCACCAAAGTGGAAACAAATCAGACCAGGGGTCTTTGTCTCCTGA
GCCAACCCACTTGCTCTCCTCACTCTCCTCATTTTCAAGCCAAAATATTTACACAACCTACAGGGTTTTGCAGTTACA
ACCAAGGTACACCTCTCCTGATGAATCACCAGCTGTGGTATCAGTAAATAACCAGCCGTCCTCTAGTCCTTCAGG
ACTTCTGGATACAATAGGAAGTGTGTAATGAATAATAATTCTCTACTGCTTGGTCAAAGTCATAGCCTTCAAAG
AGATACATGCTTAACCCAAAACAATAGTACTGCCTCCACCATGGGTAACTTCCAGAACCATCAAAATCTAGT
TGCAATGGACGAGCTGGTAGAAGTTGGAGATGTTGAGGATACAGGGAATCTGGAAGGAAGTTCATCGGATTCT
GTTGGGAGATGTGCAGACTATTCCAATACAGATTATAGACAACCACTCAGCTCTTATTGAAGAAAATCCAGAAAG
TACCATTTCTGTGAGCCAAGTTAAACAAGAACCACAAAGAACAGCATTGTCTATGGAAGCAAAAAACTGTGGACT
ATAAGAAATATCTGCTACATAAATTATTGAAGCTTTTCAAGATTTTACAACCTCTGGTGACTTCTGATGTCTTAGA
AAGGAAGGTGAATATAGTCAAAGCGTGGCATTGAGATAATTGGACTGAAGACCAGTTTGATGAGAAGCTTTTATT
TAAACTGATATATTTGTTGCCAGTTCCATATTTTTACCTTCTTAAGAGATGTTTTACTCTTCTTATTTTGTAT
AATTTTATGCTCTTTGATTATCTAATAAGGCCAGTATTTCAAAGCTGTTCTGAATTTATCCACAGTAATATAG
TCTGAACACAAAATAGTTTAACTTATCTTGGAAATATTCAATTTTGGTTATTACAAAACAGAAAAGAACAA
CAGCAACAAAAACATTGTGTGAATATATGTTGTATGTGTATGTATATCATGAATTTTTTTTTTAAGTTCTGA
AAAAGAACTTGTCTCTCCTTAAAGTTGTGAAGAAATTGTTAATTGCCAGACAGGTAAGAAAATGTTTATAATCT
ATCTCATTAAGAAAGATGAAGTATTAGATTTTACATCATAACACAAAGTCCAGCAGCTACATC

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FIGURE 1070

MEQSNDSL RVNHNDGEESKTS AQVFEHLICMDSRDSSFGQNDSP TVLPIT TREANN SLISQNI PGPLTQTQTL SA
EQFHLVDQNGQAIQYELQSLGESNAQMMIVASPTENGQVLRVIPPTQTGMAQVIIPQGQLVDVNSPRDVPEEKPS
NRNLPTVRVDTLADNTSNYILHPQTSFPLPKKSVTGMLEEP LLGFLQPLSSNTPIWACRLRSCEKIGDSYRGYCV
SETELESVLTFHKQQTQSVWGTRQSPSPAKPATRLMWKSQYVPYDGI PFVNAGSRAVVM ECQYGPRRKGFQLKKV
SEQESRSCQLYKATCPARIYIKKVQKFPEYRVPTDPKIDKKIIRMEQEKA FNMLKKNLVDAGGVLRWYVQLPTQQ
AHQYHELETPCLT LSPSPFPVSSLEEEETAVRDENCALPSRLHPQVAHKIQELVSQGIEQVYAVRKQLRK FVERE
LFKPDEVPERHNLSFFPTVNDIKNHIHEVQKSLRNGDTVYNSEIIPATLQWTTDSGNILKETMTVTFAEGNSPGE
SITTKVETNQTRGSLSPEPTHLLSSLSSFPKIFTQLQGLQLQPRYTSPDESPAVVSVNNQPSSSPSGLLDTIGS
AVMNNNSLLL GQSHSLQRDTCLTQNNSTASTMGNLPEPDQNLVAMDELVEVG DVEDTGNLEGTVHRILLGDVQTI
PIQIIDNHSALIEENPESTISVSQVKQEPKEPALSM EAKNCGL

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FIGURE 1071

AGTGTGGTTTTAGTTTTTCTAAGAAGTGGCGTGGTTTGGGGCTTTATATCCGGGAGGAGCATATGTACGCAAAT
CCTGGGGCGTTTGCAAACCCGGATCCGGGGCGTCTGGCCCCATGCCCGGCCGGGCGTTTGAGGGCTACTGCCACG
CAGCGTTTCTGGAGCCTGCCGGCTGGTGCCCTGGTGGCCTTTATCTCTGTCCCCCTTTGTCTCTTTATCTCAGG
CTCTCCAGGAGGCCGGGGGGGCCCCACTCCGCCTATCGCTCCCTCGGCTACGCTGCCACTCCAATGCCCCGCAGGT
CGCGAGCTGCTGTTCTTTTGAAGGCGCCGGAGAACCAGGGGCGTCCCGCGCCACCTCTGACTCGGAGCAGCGCCG
AGCACTGACGCTCCCGCCCTTGGGCAAGGACGCCAGTGCGCCCGCGCGTCCCTCTGCGCGGCAGCCCGTCGCG
GGCCCTCAAGGGGAAGCCCAGGCCAGGATGCCCCGGGTGCGCGGTGGCCGGGCTCCTGTTGCTGGCGGCCGCC
GGCCTCGGAGGAGTGGCGGAGGGGCCAGGGCTAGCCTTCAGCGAGGATGTGCTGAGCGTGTTCGGCGCGAATCTG
AGCCTGTGCGGCGCGCAGCTCCAGCACTTGCTGGAGCAGATGGGAGCCGCCTCCCGCGTGGGCGTCCCGGAGCCT
GGCCAGCTGCACCTTCAACCAGTGTTAACTGCTGAAGAGATCTTTTCCCTTCATGGCTTTTCAAATGCTACCCAA
ATAACCAGCTCCAAATTCTCTGTCTGTCCAGCAGTCTTACAGCAATTGAACCTTTACCCATGTGAGGATCGG
CCCAAGCACAAAACAAGACCAAGTCATTCAAGAGTTTGGGGATATGGATTCTGTGCTGAGCATTATTAATCTG
GCATCTCTCCTCGGATTGATTTTGAAGTCCACTGATAAAGAAATCTTATTTCCCAAAGATTTTGACCTTTTTTGTG
GGGCTGGCTATTGGGACTCTTTTTTCAAATGCAATTTTCCAACCTATTCCAGAGGCATTTGGATTGATCCCAA
GTCGACAGTTATGTTGAGAAGGCAGTTGCTGTGTTTGGTGGATTTTACCTACTTTTTCTTTTTTGAAAGAATGCTA
AAGATGTTATTAAGACATATGGTCAGAATGGTCATACCCACTTTGGAAATGATAACITTTGGTCCCAAGAAAA
ACTCATCAACCTAAAGCATTACCTGCCATCAATGGTGTGACATGCTATGCAAATCCTGCTGTACAGAAGCTAAT
GGACATATCCATTTTGATAATGTGAGTGTGGTATCTCTACAGGATGGAAAAAAGAGCCAAGTTCATGTACCTGT
TTGAAGGGGGCCAACTGTGAGAAATAGGGACGATTGCCTGGATGATAACGCTCTGCGATGCCCTCCACAATTTT
ATCGATGGCCTGGCGATTGGGGCTTCTGCACTTGTCTCTCCTTCAGGACTCAGTACTTCCATAGCAATCCTA
TGTGAGGAGTTTCCCCACGAGTTAGGAGACTTTGTGATCCTACTCAATGCAGGGATGAGCACTCGACAAGCCTTG
CTATTCAACTTCTTTCTGCAATGTTCTGCTATGTTGGGCTAGCTTTTGGCATTTTGGTGGGCAACAATTTTCGT
CCAAATATTATATTGCACTTGTGAGGAGCATGTTCTCTATATTCTCTGCGAGATATGTTTCCAGAGATGAAT
GATATGCTGAGAGAAAAGGTAAGTGAAGAAAAACCGATTTACCTTCTTCATGATTGAGAATGCTGGAATGTAA
ACTGGATTACAGCCATTCTACTCATTACCTTGATGCAAGGAGAAATCGAATTGGAGTAATAGAAAATGGAAGAT
GGTGTGTTAATAAAGGCATTTAATAGATAAAAAACATCTCCAAAAGGATTTTGAAGCTGATCCTATTTAGTTAA
AAAGATAATTTTGCTTTCAACTGTAGGTCCAGAAAATAATTATTGGCATCAGTCTGTGAAATAGTCCATTTATTT
GTTGTTAAAAATGCTTCAAAAGGTTTTCAGTGTGAGTCTGAGATGCCTGGTATATAGGAGCCTTTGGGAAATACT
TATTTTTCAGTATTCCATGCATATTAGATATCACCATGAAGCAAGAGACATGCATTCTATAATCATGTAGACACT
CAGACTCAGGGGAAAATACAAGTTATATCCTGAAAGCCTTTAAACTCTATGGTAGGATCAAAGATTCAAATGGT
TTCAGAGAGGTTTTATTTCAATTAATTTGTTCTAGTGCTTTCAAGAGCAAGTACATCAAATGTAGAAGGTAAAA
TGTATGCAACACTAATATAAATTATTCCAAGTCTTTAAGGAGCCAAAGAAAAAAGATTTCTCACAGCTTTTTG
TCTGTTTTGTATTTCAATTAGGAACCTGCAAGTATTTTGGAAACCATTCTAAAATAATAGGAGTTAGGAAAT
AAATAAAGTTTTGCTAGCCCTGCTAAGTTCAGGCTTAGAGGCTTATCGCTAAGTXXTAACTTCACCAGATTCCAC
GAAAAGCTGGATAGCTTTTTTTCTGACTTATGTTGTGTTGCACCCCTCACAATGGCAGAACAGTATGTAAAGC
TGGTAACACCTCGGTTTTCAGTGCACCATGTGTTTGTGTTGCAAGGTGAAGAATATGTTGGTTTTAGAGAAAGAA
TTGGATGTAATTTTATGCAATTTACTTTTTAAAGACAAACATAACTATTTAGCAGAGAATATTTTAATAAATGCAA
AACAACAGCTGGACTGCTGTACATCAAGGACAGATTAAGTGGAAAACATATGTTCCCTTATGTGTGATTGAGAGCC
ATTGAGAAAAGACTTCTTTTGTGTTTCAAGCTTATCTTTTCCATATGGTATACCTTGAAAAAATTAGCACACCAT
GGTTATTTTTCTACCTTTTTATAAAGACAGAGCCTGTTTACTCATTTAGAAGATAGAGAAAATTGGTCTAAAATT
GAACATCCTAGATTACACTCCCAAGTCACTTAAGGTGATTTGATGGTGAAGAAAATGATTGACAAAGCCCAACA
ATGATCTCAGGAATTACATTTTCCAACAGACCAAAAAATGTTTTCATGTAGCAGCAATGCAGATTTGGTGAATAT
TTAATATATATTTTAGTATGTATTTCACTTTATGACTGACAATTAATAAATATTGTTTGGCCAAATAGTAAACAC
CCTTTTGAAACCATGAAAAA

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FIGURE 1072

MAPGRAVAGLLLLLAAAGLGGVAEGPGLAFSEDLVSFVGANLSLSAAQLQHLLLEQMGAASRVGVPEPGQLHFNQCL
TAEEIFSLHGFSNATQITSSKFSVICPAVLQQLNFHPCEDRPKHKTRPSHSEVWGYGFLSVTIINLASLLGLILT
PLIKKSYFFKILTFFVGLAIGTLFSNAIFQLIPEAFGFDPKVDSYVEKAVAVFGGFYLLFFFERMLKMLLKTYGQ
NGHTHFGNDNFGPQEKTHQPKALPAINGVTCYANPAVTEANGHIHFDNVSVVSLQDGKKEPSSCTCLKGPKLSEI
GTIAWMITLCDALHNFIDGLAIGASCTLSLLQGLSTSIAILCEEFPHELGDVILLNAGMSTRQALLFNFLSACS
CYVGLAFGILVGNNFAPNIIIFALAGGMFLYISLADMFPEMNDMLREKVTGRKTDFTFFMIQNAGMLTGFTAILLI
TLYAGEIELE

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FIGURE 1073

GAATTCGGGCTCCCGCGGCTGCAGGCGCGCGCTAGAGTGCCTGGCGGGCTCCGGCTTCCGCGTCCGCCCCGGCC
CCGGTCCAGACTTAGTCTTCAGCTCCGCGCCCGCTCCGCGCGGCCCCACCGCGCCCGCCGGCAGCCGAGCCCCCA
GCGACGCCCGCACAGCTCCGGGTGCCAGACAGGGGGCCATGCCGTGCCGGAGGGAGGAGGAAGAGGAAGCCGGC
GAGGAGGCGGAGGGGGAGGAAGAGGAGGAGGACAGCTTCTCTACTGCAGCAGTCAGTGGCGCTGGGCAGCTCG
GGCGAGGTGGACCGGCTGGTGGCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAXGACAGCCCGGCCCTCG
CCGTGCGGGCCCCCGGGGGCGCGCTGCGGGCCCCGGGGCCCCCTGGCTGCGGCGGTGCCGGCGGACAAGGCCAGG
TCCCCGGCGGTGCCGCTGCTGCTGCCGCCCGCTTGGCGGAGACTGTGGGCCCGGCGCCCCCTGGGGTCTGCGC
TGCGCCCTGGGGGACCGCGGCCGCGTGCAGGGCCGCGCTGCGCCCTACTGCGTGGCCGAGCTCGCCACAGGCCCC
AGCGCGCTGTCCCCACTGCCCCCTCAGGCCGACCTTGATGGGCCTCCGGGAGCTGGCAAGCAGGGCATCCCGCAG
CCGCTGTCCGGTCCGTGCCGGCGAGGATGGCTCCGGGGCGCCGCCGCTCCCGCGCCTGCAGCAGCGACGCGGG
TCCCAACCAGAAACCCGCACAGGCGACGACGACCCGCACCGGCTTCTGCAGCAGCTAGTGCTCTCTGAAACCTC
ATCAAGGAGGCGCTGCGAAGGCTTCATTGCGCAGCGCTGCAGTTACGTGCAAAGCTTCCCCAACGCCCGCTCCTG
GGACCTCTGTCCGCCCCGGTGCATGAACCCCCCTTCGCTCGCAGCCCTCGCGCGGCCTGCAGTGACCTGGCGCC
TCCGGGAGGGCGCAGCTCAGAACTGGCGACGGCGTTCTTGTGCTTGGCAGCTAAACAGCCCCGGGGTGGCCACAGC
GCCAGCCTCAGACTGGAGGGCAAGGGGTTCCTTGAGGGCTGCAGTTCTACTCAGGCTGGTGGAGAAGCTCTGGCT
TTTGGAAGCGAGAGTAAAAAGCTAATGACGAGGAACCGAAAAATCGCGAGTGTTTCGCGGGTAAGTGGGGTTGAG
GGCCAAAATATTTGGAATGAAGGACTTGGCCCTATTTAAGGCAGATTTTACAGAGCGCACCTCAAACGTACAAGT
CAGTAGGACTCCTTATTTGGCGTGACCCGACCTGGCCGCGGAGCCTGCATTTCTCGCAGCCTCTCAGTGCCCTC
CAGCCCCGCGACCATGTGGCCACAATCCACGCTTCTCCGGATCGCGGTGCGCCGGAACCGAGGAGTATGCCA
GTTACTTGCTTTTACCTTTTTCAGGGCTGGCTCCTGATCCACTTTGGGGGAGGAGAACATGAGTAGATAATTTAGG
GTGCAGCCCAATCTGCCAGACTTAAAAAAACCATCTTGTGTCTTTGGAGGTGCTGCTTAATATCAAACATGCGGT
GCCATGAAGGGACCTTTGGGGGTGAATAGGAGTTAACCCCTGCGCTCTCTTTGCAACTGTCTCTCTCTCAGA
GTGGTGGGGGAAGGCTGTACGACACGGGTGGGGAAGGAGGTGGGGGCGGGGAGTATTGAATGGTGGTGAAGGG
TAGAGAGGCGCGGAGTGAACCCACGCCCTGTCTAAAGTGATTTTCAGAGCCGGCCCCGCTCTCTCGGTTCAA
GGTCACTGTTTTCTGGGCACGCACTGGGTGCGGGACAGAGTAGCCAGTTTCTGCGGGTGCTCGGAGAAGAGCGC
AGTGTTTTGCAAGTGCTGGAGTCTCCTGAGGACACGCGCTCGCCGCCACCGCGGGTGTTGGGAAAGCGCGGACGT
GCTGGGCGTCTGTGCTTCGGTAGGCGACACCGCCCCCTGGCCGCGCTCCGGGCTTTCACGGAACTCCCGAGACC
GGGCCCTGGGTTCTCTCTCTCTACTCGGCTCTGCAGTCTACTCAAGCGGTGGCTCTGGGATCCTGGGGGCCT
GGGTGGGGGCTAGGGAGACGCCATGTGATGGACACTCCAGGGACACACAGCCTAGCACAGCAGCTTATAATGGG
CTCTCCGGGGCCATTTGCAATAACAGCTGCAATTCCTGGATAGACGAGTTGATTTCTCTCTCTGCCCCCTCCC
CAGCCATGCCAGCTGGCCTTTGTAAGTGCAAGGAAACCGAGTAGAAAATGTGACCCTCCAAATGGAGAAGCTGCCA
GCTTTGCCATTGTGAACCATGGTGAAGTGCTTGGAACTACTGTTCACTCACTCTAAAGGCGCTGAGACTGTGCT
GTGTTCTCGTTTTTATAGTCAATGGCTTGTTTCATCATCCAGATGTGGCTACTGACATATCTACACTTCGCACCG
GAGTGTCTGGAATTGTGGCTATCCTGATTATAGGATTTAACTTAACTGAAATGCCTGCTTTGAATAAATGTGTT
GGGTTTTT

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FIGURE 1074

MPCRREEEEEAGEEEAEGEEEEEDSFLLLQQSVALGSSGEVDRLVAQIGETLQLDAAXDSPASPCGPPGAPLRAPG
FLAAAVFADKARSPAVPLLLPPALAETVGPAPPGVLRGALGDRGRVRGRAAPYCV AELATGPSALSPLPPQADLD
GPPGAGKQGIPQPLSGPCRRGWLRGAAASRRLQORRGSQPETRTGDDDPHRLQLQLVLSGNLIKEAVRRLHSRRL
QLRAKLPQRPLLGPLSAPVHEPPSPRSPRAACSDPGASGRAQLRTGDGVLPVGS

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FIGURE 1075

GGGGGGGGCGGGGCGCCAGCGGGATGCGGTGAAGGGCGAGCGGCGGGCGGGCTGCGATGAGTGCCTCTGCGGGCC
ACCGGGGTCTTCGTGCTGTCCCTCTCGGCCATCCCGGTCACCTATGTCTTCAACCACCTGGCGGGCCAGCATGAT
TCCTGGACTATTGTAGGGGTTGCTGCCCTCATCCTGTTCCCTGGTAGCACTGCTGGCTCGTGTCTCGTCAAAAGA
AAACCACCCCGGGACCCACTGTTCTATGTGTATGCAGTTTTTGGATTTACCAGCGTGGTGAACCTCATCATAGGA
CTGGAGCAAGATGGAATCATTGACGGGTTTCATGACACACTACTTGAGAGAGGGTGAACCGTATCTGAACACCGCA
TATGGGCACATGATCTGCTACTGGGATGGCTCTGCTCATTATCTGATGTACCTGGTGATGGTGGCAGCCATAGCA
TGGGAGGAACTTATAGAACCATTGGCCTATATTGGGTGGATCTATTATTATGAGTGTTGTTGTTTTGTGCCA
GGAAACATTGTAGGGAAGTATGGAACACGAATTTGCCCTGCTTTTTTCTTAAGCATAACCATATACTTGTCTTCCT
GTCTGGGCTGGTTTTCAGAATCTATAATCAGCCATCAGAAAATTATAATTACCCCTCAAAGGTTATTCAAGAAGCC
CAAGCGAAAGACCTGCTGAGAAGACCATTTGATTTAATGTTGGTTGTGTGTCTCCTCCTGGCAACTGGATTTTGC
CTGTTTCAGAGGTTTGATTGCTTTGGATTGCCCATCTGAGCTCTGCCGATTATATACGCAATTTCAAGAGCCCTAT
CTAAAGGATCCTGCTGCTTATCCTAAAATTCAGATGCTGGCATATAIGTTCTATTCTGTTCCCTTACTTTGTGACT
GCACTGTATGGCTTAGTGGTTCTGGATGTTCTGGATGCCTGACATCACATTGATACATGCTGGAGGTCTGGCT
CAGGCTCAGTTTTCTCACATTGGTGCATCTCTTCATGCTAGAACTGCTTATGTCTACAGAGTCCCTGAAGAAGCA
AAAATCCTTTTTTTAGCATTAAACATAGTATATGGAGTTCTTCCTCAGCTCTTGGCCTATCGTTGTATCTACAAA
CCAGAGTTCTTCATAAAAACAAAGGCAGAAGAAAAAGTGGAATAAAAATATTACTTCATGTTCCCTCCTTTCTAAA
TTACTAACTTTTGTATATACTGGTACTGATATTTGTCCCATTTCACTCTCTTCTCATACGTGAGTACTTAAGAAT
ATGTACATTCTTGCTCTGCACTGTATGTGTGAGCTATATGGTATTGTGTAAATTTTTTTGAAGGAAAATGGAAA
TTCTTGAGAAACAGTTTGTTTAAAGAAATATATTCAAATCATTGTGAATAAACTTGATCATCCATCTCAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1076

MSASAATGVFVLSLSAIPVTYVFNHLAAQHDSWTIVGVAALILFLVALLARVLVKRKPPRDPLFYVYAVFGFTSV
VNLIIGLEQDGIIDGFMTHYLREGEPYLNTAYGHMICYWDGSAHYLMYLMVAAIAWEETYRTIGLYWVGSIIIMS
VVVFVPGNIVGKYGTRICPAFFLSIPYTCLPVWAGFRIYNQPSSENYNYP SKV IQEAQAKDLLRRPFDLMLVCLL
LATGFCLFRGLIALDCPSELCLRYTQFQEPY LKDP AAYPKIQMLAYMFYSVPYFVTALYGLVVP GCSWMPDITLI
HAGGLAQAQFSHIGASLHARTAYVYRVPEEAKILFLALNIVYGVLPQLLAYRCIYKPEFFIKTKAEEKVE

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FIGURE 1077

GGCTGCCGGGGAGGCCAGAGCGTGGAGCGCTGCGCGGCGCGGCGGGCCCTCGAGACGGGGACGGACACACC
AGCCCCCTCAGATACCACTTGGCCACTCCCGCTGAGGCCACTCCCACTGCGTGGCTGAAGCCTCGAGGTCACCAGG
CGGAGGCGCGGAGATGCCCCCTGCATCAGCTGGGGGACAAGCCGCTCACCTTCCCCAGCCCCAACTCAGCCATGGA
AAACGGGCTTGACCACACCCCAAGGAGGAGGCGATCCCGGGGCACACCCCTGAGCCCCGGCTCCCTCCGCTC
CGCTGCCCATAGCCCCCTGGACACCAGCAAGCAGCCCCCTCTGCCAGCTCTGGGCGGAGAAGCATGGCGCCCGGGG
GACCCATGAGGTGCGGTACATCTCGGCCGGGCAGAGCGTGGCGTGCGGCTGGTGGGCCTTCGCACCGCCGTGCCT
GCAGGTCCTCAACACGCCCAAGGGCATCCTGTTCTTCTGTGTGCGGCCGATTCTGCAGGGGATGACTGTGAA
TGGCTTCATCAACACAGTCATCACCTCCCTGGAGCGCCGCTATGACCTGCACAGCTACCAGAGCGGGCTCATCGC
CAGCTCCTACGACATTGCCGCTGCCTCTGCCTCACCTTCGTGAGCTACTTCGGGGGCTCAGGGCACAAGCCGCG
CTGGCTGGGCTGGGGCGTGCTGCTTATGGGCACGGGTTTCGTGGTGTTCGCGCTGCCCCACTTCACGGCTGGCCG
CTATGAGGTGGAGTTGGACGCGGGTGTGAGGACGTGCCCTGCCAACCCCGCGCGGTGTGTGCGGACAGCACCTC
GGGCTGTCCCGCTACCAGCTGGTCTTCATGCTGGGCCAGTTCTGTCATGGCGTGGGTGCCACACCCCTCTACAC
GCTGGGCGTCACCTACCTGGATGAGAACGTCAAGTCCAGCTGCTCGCCCGTCTACATTGCCATCTTCTACACAGC
GGCCATCCTGGGCCCAGCTGCCGGCTACCTGATTGGAGGTGCCCTGCTGAATATCTACACGAAATGGGCCGACG
GACGGAGCTGACCACCGAGAGCCCACTGTGGGTGCGCGCCTGGTGGGTGCGCTTCCTGGGCTCTGGGGCCGCTGC
TTTCTTACCAGCGGTTCCCATCCTTGTTTACCTCGGCAGCTGCCAGGCTCCCAGCGCTACGCGGTCTAGAGAGC
GGCGGAAATGCACCAGTTGAAGGACAGCAGCCGTGGGGAGGCGAGCAACCCGGACTTTGGGAAAACCATCAGAGA
CCTGCCTCTCTCCATCTGGCTCCTGCTGAAGAACCCACGTTTCATCCTGCTCTGCCTGGCCGGGGCCACCGAGGC
CACTCTCATCACCGGCATGTCCACGTTTCAGCCCCAAGTTCTTGAGTCCCAGTTTCAGCCTGAGTGCCTCAGAAGC
TGCCACCTTGTGTTGGGTACCTGGTGGTGCCAGCGGGTGGTGGCGGCACCTTCCTGGGCGGCTTCTTTGTGAACAA
GCTCAGGCTCCGGGGCTCCGCGGTTCATCAAGTTCTGCCTGTTCTGCACCGTTGTGAGCCTGCTGGGCATCCTCGT
CTTCTCACTGCACTGCCCCAGTGTGCCATGGCGGGCGTCACAGCCAGCTACGGCGGGAGCCTCCTGCCCCAAGG
CCACCTGAACCTAACGGCTCCCTGCAACGCTGCCTGCAGCTGCCAGCCAGAACACTACAGCCCTGTGTGCGGCTC
GGACGGCCTCATGTACTTCTCACTGTGCCACGCAGGGTGCCCTGCAGCCACGGAGACGAATGTGGACGGCCAGAA
GGTGTACCGAGACTGTAGCTGTATCCCTCAGAATCTTCTCTGGTTTGGCCATGCCACTGCAGGGAAATGCAC
TTCAACTTGTGAGAGAAAGCCCTCCTTCTGGTTTTTCATATTCGTTGTAATTTTCTTTACATTCTCAGCAGCAT
TCCTGCACTAACGGCAACTCTACGATGTGTCCGTGACCCTCAGAGATCCTTTGCCCTGGGAATCCAGTGGATTGT
AGTTAGAATACTAGGGGGCATCCCGGGGGCCATCGCCTTCGGCTGGGTGATCGACAAGGCCTGTCTGCTGTGGCA
GGACCAAGTGTGGCCAGCAGGGCTCCTGCTTGGTGTACCAGAATTCCGGCCATGAGCCGCTACATACTCATATGGG
GCTCCTGTACAAGGTGCTGGGCGTCTCTTCTTTGCCATAGCCTGCTTCTTATACAAGCCCTGTCCGAGTCTTC
AGATGGCCTGGAACTTGTCTGCCAGCCAGTCTCAGCCCCCTGACAGTGCCACAGATAGCCAGCTCCAGAGCAG
CGTCTGACACCCGCGCGCCACCCGGCCACGGCGGGCACTCAGCATTTCTGATGACAGAACAGTGCCGTTGG
GTGATGCAATCACACGGGAACCTTCTATTTGACCTGCAACCTTCTACTTAACCTGTGGTTTAAAGTGGGCTGTGAC
CTCCTGTCCCCAGAGCTGTACGGCCCTGCAGTGGGTGGGAGGAACCTTGCAATAAATATATATTTATGGACACACAG
TTTGATCAGAACGTGTTTATAGAATGTGTTTTATACCCGATCGTGTGTGGTGTGCGTGAGGACAAACTCCGCGAG
GGGCTGTGAATCCCACTGGGAGGGCGGGCGGGCCTGCAGCCCCAGGAAGGCTTGTGTGTCCTCAGTTAAACTGTG
CATATCGAAATATATTTTGTATTTAAGCCTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1078

MPLHQLGDKPLTFPSPNSAMENGLDHTPPSRRASPGTPLSPGSLRSAHSPLDTSKQPLCQLWAEKHGARGTHEV
RYISAGQSVACGWWAFAPPCLQVLNTPKGILFFLCAAAFLLQGMTVNGFINTVITSLERRYDLHSYQSGLIASSYD
IAACLCLTFVSYFGGSGHKPRWLGWGVLLMGTGSLVFALPHFTAGRYEVELDAGVRTCPANPGAVCADSTSGLSR
YQLVFMLGQFLHGVGATPLYTLGVITYLDENVKSSCSPVYIAIFYTAAILGPAAGYLIGGALLNIYTEMGRRTLT
TESPLWVGAWWVGFLGSGAAFFTAVPILGYPRQLPGSQRYAVMRAAEMHQLKDSSRGEASNPDFGKTIRDPLS
IWLLLKNPTFILLCLAGATEATLITGMSTFSPKFLESQFSLSASEAATLFGYLVVPAGGGGTFLGGFFVNKLRLR
GSAVIKFCFLCTVVSLLGILVFSLHCPSPVMAGVTASYGGSLLPEGHLNLTAPCNAACSCQPEHYSPVCGSDGLM
YFSLCHAGCPAATETNVDGQKVYRDCSCIPQNLSSGFHATAGKCTSTCQRKPLLLVFIFFVIFFTFLSSIPALT
ATLRCVRDPQRSFALGIQWIVVRILGGIPGPIAFGWVIDKACLLWQDQCGQGSCLVYQNSAMSRYLIMGLLYK
VLGVLFFAIACFLYKPLSESSDGLETCCLPSQSSAPDSATDSQLQSSV

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FIGURE 1079

GAGTTCGGGGCCAGCAGCCGTCTACCCGGTGTGCGGTTCTGTGTTGTGGCGGCCCTGGATCCGGCGTCAGGGCGA
CCGGGCGGACGAGGTGGAGCCAGAGTCTGTCAGGCGGGTTGGTGAAGGGCGCGGGGCCGGGCACGGCGTTGGGAG
TGCGCGGCAGGGACCGGCCAGGCGGGCTGCAGGCACCTCAGAGCCCGGGACACCCCCCTCAACGTCCGCAGGCGCG
ATGAAGGCACTGATCTTAGTGGGGGGCTATGGGACGCGGCTACGGCCGCTGACGCTGAGCACCCCGAAGCCACTG
GTGGACTTCTGCAATAAGCCCATCTTGCTGCACCAAGTGGAGGCGCTAGCCGCGGCAGGCGTGGACCACGTGATC
CTGGCCGTGAGCTACATGTCGAGGTGCTGGAGAAGGAAATGAAGGCACAGGAGCAGAGGCTGGGAATCCGAATC
TCCATGTCCCATGAAGAGGAGCCTTTGGGGACAGCTGGGCCCTGGCGCTGGCCCGTGACCTACTCTCTGAGACT
GCAGACCCTTTCTTCGTCTCAACAGTGACGTGATCTGCGATTTCCCTTCCAAGCCATGGTGCAGTTCCACCGG
CACCATGGCCAGGAGGGCTCCATCCTGGTGACCAAGGTGGAGGAACCCCTCCAAGTACGGTGTGGTGGTGTGTGAG
GCTGACACAGGCCGCGATTACACGGTTTCGTGGAGAAGCCACAGGTGTTTGTGTCCAATAAGATCAACGCAGGCATG
TACATCCTGAGCCCTGCAGTGCTGCGGCGCATCCAGCTGCAGCCTACGTCCATTGAGAAGGAGGTCTTCCCCATT
ATGGCCAAGGAGGGGCGAGCTATATGCCATGGAGTTACAGGGCTTCTGGATGGACATTGGGCAGCCCAAGGACTTC
CTCACTGGCATGTGCCTCTTCTTCGTGAGTCACTGAGGCAGAAGCAGCCTGAGCGGCTGTGCTCAGGCCCTGGCATT
GTGGGCAACGTGCTGGTGGACCCAAAGTGCCCGCATCGGCCAGAACTGCAGCATTGGCCCCAATGTGAGCCTGGGA
CCTGGCGTGGTGGTTCGAAGATGGTGTGTGTATCCGGCGGTGCACGGTGCTGCGGGATGCCCGGATCCGTTCCCAT
TCCTGGCTTGAGTCTGCAATTGTGGGCTGGCGCTGCCGCGTGGGTGAGTGGGTAAGCCTGTGGGCTGGGCTGGGT
GGGAGAGGGGCGGGGAGTGTGCCTGCCTCCCTGACAAGGCCTATCCTCTCCTGGAGGTACGCATGGAGAACGTG
ACAGTGCTGGGTGAGGACGTCATAGTTAATGATGAGCTCTACCTCAACGGAGCCAGCGTGCTGCCCCACAAGTCT
ATTGGCGAGTCAGTGCCAGAGCCTCGTATCATCATGTGAGGGGATGCAGTGGGGCTGGCCGAGCCCCGGTTTTCC
CATCAGCAAGGGGAGTGCTGGCCTGACACATCAGAAGACCCTGGACTTGTCATTATTTGTCTGGGGGGCACTGGG
TGAAGCTGAAGCTGTTGGACACCTGCCTTCTCATGTGGACATCATCTGGCAGGATCCCTGCTGGGCACACCCAC
AAACCCCACTCCCTCAAGAAGGGCCAGGGCCAGGGCTGTATGGAATAATAATTTAATGCTCACTGTGAAAAAAA
AAAAAAAAAAAAA

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FIGURE 1080

MKALILVGGYGTRLRPLTLSTPKPLVDFCNKPILLHQVEALAAAGVDHVILAVSYMSQVLEKEMKAQEQRIGIRI
SMSHEEEPLGTAGPLALARDLLSETADPFFVLNSDVICDFPFQAMVQFHRHHGQEGSILVTKVEEPSKYGVVVCE
ADTGRIHRFVEKPQVFVSNKINAGMYILSPAVALRRRIQLQPTSIEKEVFPIMAKEGQLYAMELQGFWM DIGQPKDF
LTGMCLFLQSLRQKQPERLCSGPGIVGNVLVDP SARIGQNCSIGPNVSLGPGVVVEDGVCIRRCTVLRDARIRSH
SWLESCIVGWRCRVGQWVSLWAGLGGERGGECACLPD KAYPLLEVRMENVTVLGEDVIVNDELYLNGASVLP HKS
IGESVPEPRIIM

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FIGURE 1081

AAGGCTATTATTACCACCACTGAGTGGCTTAAATAATCCTGTCAACAGCAATCGCCCATTTCCAAAGCCATGGTG
AAACATCTCTGTGCTAATTTCTTTTGTGTTTCCTAATTTTTTTTTTTTGGCAGGTGGTGGGAAATAATCTTT
GTCTTCTTTGGAGTAAACCTTCAACACCGGATTTTTTCTTTTAATTATGGATGTAAACCCCAATATCCCCATAAT
TTACATTGGGTCTCGACCAATTGCCTAATTATAAGAGGATATATTTAGGCTCTTATTTTCATCCACACAAAACTT
GTGTAACAGGTAGTTGGAAACATCTGAGGCACCACCTTGATTCTGTTTTGGATGGTCATGTTTTTCTCCTCCGT
TTCCCCAGCATGTCTGCCACCATCCTCATGCACTGCTTCCAAGTGCCTGGGAGCCTTTATGAGCGTCCCTAAACC
TAAAGAATCCAGAGGCGGGGCTCGGATGAACCCCTCGAGATAAGCAAGTGAGCCGCTTCTCCCTCTAAAGGATG
TTTACACGTGGGTGGCACTCGCTGGAATCCAGCGCTCGGGCAGCCCTGGGAGGACGCGCTCAGCTGCGAGGAGGA
TGGAGAGCAATACATCATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCAGATCCAAGAAAACAATTTCTG
ATAATTGTGTGGTGATTTTCTCAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAAGCTTTTCCATGACATGA
ATGTAACTATAAAGTGGTGGAACTGGACCTGCTTGAATATGAAACCAGTTCCAAGATGCTCTTTACAAAATGA
CTGGTGAAAGAACTGTTCCAAGAATATTTGTCAATGGTACTTTTATTGGAGGTGCAACTGACACTCATAGGCTTC
ACAAAGAAGGAAAATTGCTCCCACTAGTTCATCAGTGTTATTTAAAAAAAAGTAAGAGGAAAAGAATTTAGTAT
GTTTATACTAATAAGTTTGCTAGTACAGTGTCAGTTATTTAAAGTGGTAATGCCCGATAATGTCCTTTTAAATGTT
TGAGGATGTTTTAAATACATGCATTGTCTTCACGAAGAAGATGTAAAAATAATGAACAATAAATTGCGGTGGAAA
CCTAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1082

MNPRDKQVSRFSPLKD VYTWVALAGIQRSGSPGRTRSAARRMESNTSSSLENLATAPVNQIQETISDNCVVIFSK
TSCSYCTMAKKLFHDMNVNYKVVELDLLEYGNQFQDALYKMTGERTVPRI FVNGTFIGGATDTHRLHKEGKLLPL
VHQCYLKKSKRKEFQ

[illegible]

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FIGURE 1084

MPAERPAGSGGSEAPAMVEQLDTAVITPAMLEEEEQLEAAGLERERKMLEKARMSWDRESTEIRYRRLQHLLLEKS
NIYSKFLTKMEQQQLEEQKKKEKLERKKESLKVKKGKNSIDASEEKPVMRKKRGREDESYNISEVMSKEEILSV
AKKNKKENEDENSSSTNLCVEDLQKNKDSNSIIKDRLSETVRQNTKFFFDVPVRKCNQGPVPFQQPKHFTGGVMRW
YQVEGMEWLRMLWENGINEILADEMGLGKTVQCIATIALMIQRGVPGPFLVCGPLSTLPNWMAEFKRFTPDIP TM
LYHGTQEERQKLVRNIYKRKGTLQIHPVVITSFEIAMRDRNALQHCYWKYLIVDEGHRICKNMKRLIRELKRFNA
DNKLLLTGTPLQNNLSELWSLLNFFLLPDVFDDLKSFESWFDITSLSETAEDIIAKEREQNVLHMLHQILTPFLLR
RLKSDVALEVPPKREV VVYAPLSKKQEIFYTAIVNRTIANMFGSSEKETIELSPTGRPKRRTRKSINYSKIDDFP
NELEKLISQIQPEVDRERAVVEVNIPVESEVNLKLQNMMLLRKCCNHPYLI EYPIDPVTQEFKIDEELVTNSGK
FLILDRMLPELKKRGHKVLLFSQMTSMLDILMDYCHLRDFNFSRLDGSMYSEREKNMHSFNTDPEVFIFLVSTR
AGGLGINLTAADTVIIYDSWNPQSDLQAQDRCHRIGQTKPVVYRLVTANTIDQKIVERAAAKRKLEKLIHKN
HFKGGQSGLNLSKNFLDPKELMELLKSRDYEREIKGSREKVISDKDLELLLLDRSDLIDQMNASGPIKEKMGIFKI
LENSEDSSPECLF

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FIGURE 1085

GAATTCGGGCAAAATGCATGACAGTAACAATGTGGAGAAAGACATTACACCATCTGAATTGCCTGCAAACCCAGG
TTGTCTGCATTCAAAGAGCATTCTATTAAAGCTACCTTAATTTGGCGCTTATTTTCTTAATCATGTTTCTGAC
AATCATAGTGTGTGGAATGGTTGCTGCTTTAAGCGCAATAAGAGCTAACTGCCATCAAGAGCCATCAGTATGTCT
TCAAGCTGCATGCCAGAAAGCTGGATTGGTTTTCAAAGAAAGTGTTTCTATTTTCTGATGACACCAAGAACTG
GACATCAAGTCAGAGGTTTTGTGACTCACAAGATGCTGATCTTGCTCAGGTTGAAAGCTTCCAGGAACTGAATTT
CCTGTTGAGATATAAAGGCCCATCTGATCACTGGATTGGGCTGAGCAGAGAACAAGGCCAACCATGGAAATGGAT
AAATGGTACTGAATGGACAAGACAGTTTCCTATCCTGGGAGCAGGAGAGTGTGCCTATTTGAATGACAAAGGTGC
CAGTAGTGCCAGGCACTACACAGAGAGGAAGTGGATTTGTTCCAAATCAGATATACATGCTTAGATGTTACAGCA
AAGCCCCAACTAATCTTTAGAAGCATATTGGAAGTGAAGTCCATTTTAAATGAGCAAAGAATTTATTTCTTA
TACCAACAGGTATATGAAATATGCTCAATATCACTAATAACTGGGAAAATACAAATCAAATCATAGTAAATA
TTACCTGTTTTCATGGTGCTAATATTACCTGTTCTCCCACTGCTAATGACATACCCGAGAATGAGTAATTTATAA
ATAAAAGAGATTTAATTGAAAAAA

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FIGURE 1086

MHDSNNVEKDITPSELPANPGCLHSKEHSIKATLIWRLFFLIMFLTIIIVCGMVAALSAIRANCHQEPSVCLQ AAC
PESWIGFQRKCFYFSDDTKNWTSSQRFCDSDADLAQVESFQELNLLRYKGPSDHWIGLSREQGQPWKWINGTE
WTRQFPILGAGECAYLNDKGASSARHYTERKWICKSDIHV

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FIGURE 1087A

CTCCTCCTCCGTCTCCTCCTCTCTCTCATCTGCTGTGGTTATGSCCTGTCGCTGGAGCACAAAAGAGTCTCCG
CGGTGGAGGTCTGCGTTGCTCTTGCTTTTCTCGCTGGGGTGTACGGAAATGGTGCTCTTGCGAACATTCTGAA
AATGTGCATATTTTCAGGAGTGTCAACTGCTTGTGGAGAGACTCCAGAGCAAATACGAGCACCAAGTGGCATAATC
ACAAGCCCAGGCTGGCCTTCTGAATATCCTGCAAAAATCAACTGTAGCTGGTTCATAAGGGCAAACCCAGGCGAA
ATCATTACTATAAGTTTTTCAGGATTTTGATATTCAAGGATCCAGAAGGTGCAATTTGGACTGGTTGACAATAGAA
ACATACAAGAATATTGAAAGTTACAGAGCTTGTGGTTCCACAATTCCACCTCCGTATATCTCTTCAACAAGACCAC
ATCTGGATTAGGTTTCATTCCGGATGACAACATCTCTAGAAAAGGTTTCAGACTGGCATAATTTTTTCAGGGAAATCT
GAGGAACCAAATTTGTGCTTGTGATCAGTTTCGTTGTGGTAATGGAAAAGTGTATACCAGAAGCCTGGAAATGTAAT
AACATGGATGAATGTGGAGATAGTTCGGATGAAGAGATCTGTGCCAAAGAAGCAAATCCTCCAAGTCTGCTGCT
TTTCAACCCCTGTGCTTACAACCAGTTCCAGTGTATATCCCGTTTACCAAAGTTTACACTTGCCCTCCCCGAATCT
TTAAAATGTGATGGGAACATTGACTGCCTTGACCTAGGAGATGAGATAGACTGTGATGTGCCAACATGTGGGCAA
TGGCTAAAATATTTTTATGGTACTTTTAATTCTCCCAATTATCCAGACTTTTATCCTCCTGGAAGCAATTGCACC
TGGTTAATAGACACTGGTGATCACCCTAAAGTCATTTTACGCTTCACTGACTTTAAACTTGATGGTACTGGTTAT
GGTGATTATGTCAAAATATATGATGGATTAGAGGAGAATCCACACAAGCTTTTGGCGTGTGTTGACAGCTTTTGAT
TCTCATGCACCTCTTACAGTTGTTTCTTCTTCTGGACAGATAAGGGTACATTTTTGTGCTGATAAAGTGAATGCT
GCAAGGGGATTTAATGCTACTTACCAAGTAGATGGGTCTGTTTGCCATGGGAAATACCCTGTGGAGGTAAGTGG
GGGTGTTATACTGAGCAGCAGCGTTGTGATGGGTATTGGCATTGCCCAAATGGAAGGGATGAAACCAATTGTACC
ATGTGCCAGAAGGAAGAATTTCCATGTTCCCGAAATGGTGTCTGTTATCCTCGTTCTGATCGCTGCAACTACCAG
AATCATTGCCCAAATGGCTCAGATGAAAAAACTGCTTTTTTTTGCCAACCAGGAAATTTCCATTGTAAAAACAAT
CGTTGTGTGTTTGAAAGTTGGGTGTGTGATTCTCAAGATGACTGTGGTGATGGCAGCGATGAAGAAAATTGCCCA
GTAATCGTGCCCTACAAGAGTCATCACTGCTGCCGTCATAGGGAGCCTCATCTGTGGCCTGTTACTCGTCATAGCA
TTGGGATGTACTTGTAAGCTTTATTCTCTGAGAAATGTTTGAAAGAAGATCATTGAAACACAGTTGTCAAGAGTG
GAAGCAGAATTGTTAAGAAGAGAAGCTCCTCCCTCGTATGGACAATTGATTGCTCAGGGTTTAATTCCACCAGTT
GAAGATTTTCTGTTTGTTCACCTAATCAGGCTTCTGTTTTGGAAAATCTGAGGCTAGCGGTACGATCTCAGCTT
GGATTTACTTCAGTCAGGCTTCCCTATGGCAGGCAGATCAAGCAACATTTGGAACCGTATTTTTTAATTTTGCAAGA
TCACGTCATTCTGGGTCAATTGGCTTTGGTCTCAGCAGATGGAGATGAGGTTGTCCCTAGTCAGAGTACCAGTAGA
GAACCTGAGAGAAATCATACTCACAGAAAGTTTGTTTTCCGTGGAGTCTGATGATACAGACACAGAAAATGAGAGA
AGAGATATGGCAGGAGCATCTGGTGGGGTTGCAGCTCCTTTGCCTCAAAAAGTCCCTCCCACAACGGCAGTAGAA
GCGACAGTAGGAGCATGTGCAAGTTCCCTCAACTCAGAGTACCCGAGGTGGTCAATGCAGATAATGGAAGGGATGTG
ACAAGTGTGGAACCCCCAAGTGTGAGTCCAGCACGTCACCAGCTTACAAGTGCACCTCAGTCGTATGACTCAGGGG
CTACGCTGGGTACGTTTTACATTAGGACGATCAAGTTCCCTAAGTCAGAACCAGAGTCCTTTGAGACAACCTTGAT
AATGGGGTAAGTGAAGAGAAGATGATGATGATGTTGAAATGCTAATTCCAATTTCTGATGGATCTTCAGACTTT
GATGTGAATGACTGCTCCAGACCTCTTCTTGATCTTGCCCTCAGATCAAGGACAAGGGCTTAGACAACCATATAAT
GCAACAAATCCTGGAGTAAGGCCAAGTAATCGAGATGGCCCTGTGAGCGCTGTGGTATTGTCCACACTGCCCAG
ATACCAGACACTTGCTTAGAAGTAACACTGAAAAACGAAACGAGTGATGATGAGGCTTTGTTACTTTGTTAGGTA
CGAATCACATAAGGGAGATTGTATACAAGTTGGAGCAATATCCATTTATTATTTTGTAACCTTACAGTTAAACTA
GTTTTAGTTTTAAAAAGAAAAAATGCAGGGTGATTTCTTATTATTATATGTTAGCCTGCATGGTTAAATTCGACAA
CTTGTAACCTCTATGAACCTTAGAGTTTACTATTTTAGCAGCTAAAAATGCATCACATATTATATTGTTCAATAAT
GTCCTTTTCAATTTGTTTCTGATTGTTTTTCATCCTGATACTGTAGTTCACTGTAGAAATGTGGCTGCTGAAACTCAT
TTGATTGTCATTTTTATCTATCCTATGTTAAATGGTTTTGTTTTTACAAAATAATACCTTATTTTAATTGAAACGT
TTATGCTTTTGCCAACACATCTTGTAACCTTAATATACTAGATGTTAAGGTTGTTAATGTACAAAAAAAACCCCT
TATACTCACCTGCGTTTTTCAATTTGTTTGACATTTGTCTATTATTGGATTTTATTATCATATGAACCTTGTCAGTGG
GAAACAACTGTCTAAAAATTTTTCTTACGTTTAAACATACAATCATGTGAAATTTAGGCAGAGTTTCGATAAAT
TACTGGCAAAAACAAACTCTTTTATAAAGATTTTCTAATGTTGACTTTAATACTCTAACATGGTACAAAACCAA
TGGTAAAATCCCAAGTCATTTCTTTTTTTCATCTCTATTTAGCAACAGAATTAAGTGGATGAAGATATTCTACTAT
GCATTAAATCTTGAACCTTTATAAAACATGTACAAAAATTGTACAAGATAAGTTCCACCTGGTAATGTCTTTCCCT
AATACAGGGTTGCGCTTGCAATTGGACCCTAGGGATTTGCACTAAAATTATATCAAGGTCTCAGATGAGCTTAGTG
CACAAGCACTATCACTTTAAATACTATTATTGCTACCACAGCAACTATATATTTCCATAGCTTTTGGCTGGGGG

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FIGURE 1087B

CGGGGGACATTTTTATTACAACCTGAAATTGCTTTGCTGGTTTCATATTTATTTGTTGTATTTAAAAAATACATT
GTTGTAAGAGTGATTTTTTCAATATATTTTATTCCTGGGGGGGATCATGCTACACTCTCAAAGAAAAATTAAGAA
ATCATTTCAGATCATCCCCCTTTTAAAGTAGTGTGAATTGCAAACCCAACATATTTTTTTTACTGTCAGTTGCG
GTTTATTTATTTCTTTAACTGCTGTTTTAGTAGTTTAAATGATTATGAAAAATGTATCTGTGTGTGATTGCTATT
TATTAAATTTTAAAGTACTTTGCTGAATGTCATTTTAAAGCATGTTTGAAGTCTTGTGTATTTGTCTGTGTTAATG
CTGTCAGGAGGAAGTACTGACTAAGATGTTTTAATATGTATCAAAAATTAAATGATTTTTTTTATTGCCTTGAGGTA
CTTTTAAAAA

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FIGURE 1088

MACRWSTKESPRWRSALLLLFLAGVYGNALAEHSENVHISGVSTACGETPEQIRAPSGIITSPGWPSEYPAKIN
CSWFIRANPGEIITISFQDFDIQGSRRCNLDWLTETIYKNIESYRACGSTIPPPYISSQDHIWIRFHSDDNISRK
GFRLAYFSGKSEEPNCACDQFRGNGKCIPEAWKCNNMDECGDSSDEEICAKEANPPTAAAFQPCAYNQFQCLSR
FTKVYTCLPESLKCDGNIDCLDLGDEIDCDVPTCGQWLKYFYGTFNPNYPDFYPPGSNCTWLIDTGDHRKVILR
FTDFKLDGTGYGDYVKIYDGLEENPHKLLRVLTAFDASHAPLTVVSSSGQIRVHFCADKVNAARGFNATYQVDGFC
LPWEIPCGGNWGCYTEQQRCDDGYWHCPNGRDETNCMTMCQKEEFPCSRNGVCYPRSDRCNYQNHCPNGSDEKNCFF
CQPGNFHCKNNRCVFESWVCDSDDCGDSDEENCPVIVPTRVITA AVIGSLICGLLLVI ALGCTCKLYSLRMFE
RRSFETQLSRVEAELLRREAPPSYGQLIAQGLIPPVEDFPVCSPNQASVLENLRLAVRSQLGFTSVRLPMAGRSS
NIWNRI FNFARSRHSGSLALVSADGDEVVPSQSTSREPERNHTHRSLSVESDDTD TENERRDMAGASGGVAAPL
PQKVPPTTAVEATVGACASSSTQSTRGGHADNGRDVTSEPPSVSPARHQLTSALSMTQGLRWVRFTLGRSSSL
SQNQSPLRQLDNGVSGREDDDDVEMLIPISDGSSDFDVNDCSRPLLDLASDQGQGLRQPYNATNPGVRPSNRDGP
CERCGIVHTAQIPDTCLEVT LKNETSDDEALLLC

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FIGURE 1089

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCC**ATG**CTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGCTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTTGTTCCCCAGAGCAGGCAGTG
GAACTCAGTGCCTCCTGGCCCAGACCAAGTTTGGAGACTACAACCAGAACACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTGCAGATTGTGTCGGCAATGGAAACTATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTAAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCA
TGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAAGTCTTCTCAATCTG
ACTGTAATCT**TAA**TCTGTTGTGCTTTTGTGGACTTGGCATGTTCCATGAACTGCACTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAA

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FIGURE 1090

MLCYVTRPDAVLMEVEVEAKANGEDCLNQVCRRLGIIIEVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQTKFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSAVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSESSMNCSSCEGLSCQQTRVLQ
EKLRKLKEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQHVVLPHTHTSLNLTVI

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FIGURE 1091

GGAAGCTCAGCAGTGTCCACTGTGCGCCATTCCTTGGCCATAGAAAACAATGTATTTGAATTTTGATGTAAGCATA
GCAAATTGAAGATGAAGATGACACGTTGATTTCTTGTTTGAAATTAACCAAGTCCCGAGAAAAGAAAGTGAATAG
TGTTAGCACGAGGAGGAAGGAAGAAATGAGATTAGATTGGATACTCTTTCTGCATCACTGGGTAGATCCAGCAC
TTTAAATGACTGCAACTTGAAGATAAATTAGCTTGGTATGAAGGTGAAGCTTACATGTGGCATCACTGGAAGCC
TTTTCTGAAAACCTCTCTGGACATGTCTTGATTTCCAAATAGCACAAAGTTGGACCCTGGGACTACTGCTCCTC
TTGTATTGCGCCACACACGTCTCAAGTCTTCCTGCTCAGATATGGATCTCCTACATTCATGGCGAAGCAGCAGTTT
TGGGAATTTGATCGTTTTTCGGAATAATTCTTTATCAAAACCAGATGATTCAACTGAGGCACATGAAGGAGATCC
CACAAATGGAAGTGGAGAACAAGTAAACTTCAAATAATGGAGGCGGTTTGGGTAAAAAATGAGAGCTATTTTC
ATGGACAATGAAGAAAAAGTGGGTAAAAAGTACATCAAAGCCCTTTCTGAGGAAAAGGATGAGGAAAGATGGAGA
GAATGCCCCACCATATAGAAACAGTGACCCTGTGATTGGGACCCACACAGAGAAGGTGTCCCTCAAAGCCAGTGA
CTCCATGGATAGTCTCTACAGTGGACAGAGCTCATCAAGTGGCATAACAAGCTGTTTCAGATGGTACAAGTAACCG
GGACAGCTTTGACTGGATGACGATGGCCCCATTTCAGGACCATTCTGTGGCCGTGCCAGAGTGCATACGGATTT
CACGCCAAGTCCCTATGACACTGACTCCCTCAAATCAAGAAAGGAGACATCATAGACATTATTTGCAAAACACC
AATGGGGATGTGGACAGGAATGTTGAACAATAAAGTGGGAACTTCAAATTCATTTATGTGGATGTCTATCTCAGA
AGAGGAAGCAGCCCCCAAGAAAATAAAGGCAAAACCGAAGGAGTAACAGCAAAAAATCCAAGACTCTGCAGGAGTT
CCTAGAGAGGATTCATCTGCAGGAATACACCTCAACACTTTTGCTCAATGGTTATGAGACTCTAGAAGATTTAAA
AGATATAAAAGAGAGTACCTCATTGAATTAATATTGAAAACCCAGATGACAGAAGAAGGTTACTATCAGCTGC
TGAAAACCTTCCTTGAAGAAGAAATTATTCAAGAGCAAGAAAATGAACCTGAGCCCTATCCTTGAGCTCAGACAT
CTCCTTAAATAAGTCACAGTTAGATGACTGCCCAAGGGACTCTGGTTGCTATATCTCATCAGGAAATTCAGATAA
TGGCAAAGAGGATCTGGAGTCTGAAAATCTGTCTGACATGGTACATAAGATTATTATCACAGAGCCAAGTGACTG
AACACGCATTCCCACTATATATCTACAGATGCATTCCATTTTAACTCTTCTTGAGCTAAAACGTCAAATAGGAG
AGGAAGATAAGATAAATATTTGTAAATAAAACCTAAAGTTTAAATGTTTTAATCTGAATAATTGTACATAAAATT
TTGTATCTCTAACATTCCAAATTACTGTCAATAAAATATATATTTATTATTTTAAATGCTATGTGTTAATATTTT
ACTTGCTTGTATTAGAAAGGCAAAATGTAAGACTTTGGTATGTGTGACATATGCTTTATTTGGCTTTATTTTACA
AGTACAGTATCTGCAAAAACAAAGTAACCTTTTTTCATACCTGCCAGTTTTGAATTTATATATGTTATTGAACA
AATAGTAATAGAGGATTCGCTGTTGAAACAAGTTGTCCAAGCAATGTTATATTCAATTTTTATACTTATTGGGAAA
GTGTGAGTTAATATTGGACACATTTTATCCTGATCCACAGTGGAGTTTTAGTAATTATATTTGTTGATTCTTC
ATTTTGTCTTCTGGTATAAAAGTAGAGATAATGTGTAGTCACTTCTGATTTAGTGAAACCAATTGTAATAATTGT
GGAAATGTTTTGTCTTTAAGTGTAATATTTTAAATTTGACATACCCTAATGTTAATAATAAAAGAACTATTT
GCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1092

MEIRLDTLSASLGRSSTLNDCNLEDKLAWYEGEAYMWHHWKPFPEPLWTCCLDFQIAQVGPWDYCSSCIRHTRLK
SSCSDMDLLHSWRSSSFGNFDRFRNNSLSKPDDSTEAEHGDPTNGSGEQSKTSNNGGGLGKKMRAISWTMKKKVG
KKYIKALSEEKDEEDGENAHPYRNSDPVIGTHTEKVSLKASDSMDSLYSGQSSSSGITSCSDGTSNRDSFRLDDD
GPYSGPFCGRARVHTDFTPSPYD TDSLKIKKGDIIIDIICKTPMGMWTGMLNNKVGNFKFIYVDVISEEEAAPKKI
KANRRSNSKKSKTLQEFLEIRHLQEYTSLLLNGYETLEDLKD IKESH LIELNIENPDDRRRLLSAAENFLEEEI
IQEQENEPEPLSLSSDISLNKSQLDDCPRDSGCYISSGNSDNGKEDLESENLSDMVHKIIITEPSD

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FIGURE 1093

CGGGAATCCCTGCAGCTGAGCCTGTCTCTCACGGGACCGGGAAGCTGGAGAGAGCCCCAACCCCTGCCCGCTGGGG
CCGAGCTCCCTGCTCCTGCAGCAGTCCCATGCCCCACACTCTGAGTCTGCCCTATCCACAGCTGCTGGGCCTCTC
TGTGGCCACC**AT**GGTGACTCTTACCTACTTCGGGGGCCACTTTGCTGTTCATCCGCCGAGCGTCCCTGGAGAAGAA
CCCGTACCAGGCTGTGCACCAATGGGCCTTCTCTGCGGGGTTGAGCCTGGTGGGCCTCCTGACTCTGGGAGCCGT
GCTGAGCGCTGCAGCCACCGTGAGGGAGGCCAGGGCCTCATGGCAGGGGGCTTCCTGTGCTTCTCCCTGGCGTT
CTGCGCACAGGTGCAGGTGGTGTCTGGAGACTCCACAGCCCCACCCAGGTGGAGGACGCCATGCTGGACACCTA
CGACCTGGTATATGAGCAGGCGATGAAAGGTACGTCCACGTCCGGCGGCAGGAGCTGGCGGCCATCCAGGACGT
GTTTCTGTGCTGTGGGAAGAAGTCTCCTTTTCAGCCGTCTGGGGAGCACAGAGGCTGACCTGTGTCAGGGAGAGGA
GGCGGCGAGAGAGGACTGCCTTCAGGGCATCCGGAGCTTCCTGAGGACACACCAGCAGGTGCGCTCCAGCCTGAC
CAGCATCGGCCTGGCCCTCACGGTGTCCGCCTTGCTCTTCAGCTCCTTCCTGTGGTTTGCCATCCGCTGTGGCTG
CAGCTTGGACCGCAAGGGCAAATACACCCTGACCCACGAGCATGTGGCCGCCAGCCCCAGGAGCCCAGCCTCTT
GAGATGCTCCCAGGGTGGACCCACACATTGTCTCCACTCCGAAGCAGTTGCTATTGGTCCAAGAGGATGCTCGGG
TAGTCTTCGGTGGCTGCAGGAGAGCGATGCTGCGCCTCTGCCCCCTCTCCTGCCACCTGGCTGCCACAGAGCTCT
CCAGGGCAGAAGTCGCGGTGGGCTCAGTGGGTGCCCTGAGCGGGTCTCTCAGACTGACGTCAGGCCTTGGTGGG
CTGCACTCTCACCTGGAGGCTCCGGGGAAGCATCTGCCTCCAGGACCATTGAGGCTGTTGACAAGTCAACTCCTC
ATGGCTGTAGGACTGAGGTTCCCAAGTCCTTGTCCTGGTCCTGTGGTCCCTCCACCTTCAAACCAGCAATGGTG
CATTGAGCAAATTGTGGTCAAATATACATCACATCAAATTTACCATCTTAAAAAA

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FIGURE 1094

MVTLTYFGAHFAVIRRASLEKNPYQAVHQWAFSAGLSLVGLLTLGAVLSAAATVREAQGLMAGGF LCFSLAFCAQ
VQVFWRLHSPTQVEDAMLDTYDLVYEQAMKVSVLWEEVSFQPSGEHRG

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FIGURE 1095

GGAAATCTCACTCATTGTTCATATATTGGTCTCTG
AGGTCCCTTCTAGGCTCTGACAACTGGAACTCTGAAAATAGACATATTGATGCTCTTTGACTGTTGGAAACCTTG
CAGAGCAAGAATTTGTAACCATTGCACGTCACTACCGTGTGCCTGAGGGCACATGTTTCAGATATGGATTTCTTAA
TCGCACTGGCCACGAAAAGTTCAAGAAAAATATGTTTGAGAATTCGACACTTTTCATTTATTCTGTGTGTATG
AAGATCGAGAAAAAAAAAATGTATTACCCACCAAAGACATTAAAAGGCTGTGCAAATCCTCCAGATTACCTTTGA
GTGATGATCTTCTAGAATCCTTATTGTCAAGGTTTGAAGACAGTGAAAAACAAATAGATTATAAGTCATTTTTCT
CTGCCCTGAACTGGAGAAAGAATCCAGCGCTGAATTGCAACCAGCATCATACCTTAAAGAGAGATGTGAAGATG
TTTGGCTTGGTATGCCATCACCTATTCTGCGAAATACATTGACTACTGGACCTTTTTGAAGGACGCGTTTGGCT
TAGAGGAGGAATAAACCATGCCAGTTTTGGTCAATTCTCTATGATTTACTTCTCTCATTTTGCCACATTTACTTTA
GTAGATATAATTTCAATTAACAAACAAAAAGAAACAAGGTTTATATTAAATGGAAATCCATAAACCAATTAATC
CTATTTTGTCTATGTTAGTTTTACAGAACATCATGTTACATTGCCGACGTACTGTTACTATTTAAATGCCATCTT
AAAACATGTTGAATATTTTTATTATATGTATGGTTTATTAATACCAAAAATCTTCTGATAATTTTGATCCAAC
ATAATTTGATTCATTACTATATGAACAGAAAATGACTTTTGAAGGTTATACATGACAATACAAAATCAAATTATA
TCACAGCAATAAGTTGTGATTCTATTAAACATTTTGAACCTTTTGGACACGTTTATTACTTACATAATTAAGT
TTTGTAGCAACCCACCTCATCAAAATAATTCTTAAACCTCTCTAGAGTAAATATATTTATCTTTGAACTTAGTA
AAGCTATGGGAAGAAAAAGAACCTCCAACACACACACACACACACACACACACGACGTGCACACACACTGGAAA
CATATGCAGTATTTATATTTGTAATGCCCTTTTTCTATCTAAAGTCAGCTTGTTAGCCTAGGAATATATGCATG
TGTGTATAATTATAGTTTGACCAAACTTTATTATGTCTAAAATATTTACAAATGTGAAAGCTGAAGATTTTGAG
ATTTTTGTTTTTTTTTTTGGTTTGTGTTTACACACACATCCCACGCGCCCCACCCTAGAGGTTTAAATATTCAGAAA
CTACAACATTTTCCCTGCATTTTCTAGTTCTATTTTATTTTCTTCAGCAGAACTCTTGTCATGTAGTGTA
CATTTGATTAAACCCATAGCCATGTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1096

MSLTVGNLAEQEFVTIARHYRVPEGTCSDMDFLIALAHEKFKKNMFENFDTFIYSCVYEDREKKNVLPTKDIKRL
CKSSRLPLSDDLLESLLSRFEDSEKQIDYKSFFSALNWRKNPAPELQPASYLKERCEDVWLGMPSPIPAKYIDYW
TFLKDAFGLEEE

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FIGURE 1097

ATTTTCATGTTATACTTAATAAAACAAAACATACCTGTATACACACACATTCACTCACATTGAAGATGCAAGATGA
AGAAAGATACATGACATTGAATGTACAGTCAAAGAAAAGGAGTTCTGCCCCAACATCTCAACTTACATTTAAAGA
TTATTTCAGTGACGTTGCACTGGTATAAAATCTTACTGGGAATATCTGGAACCGTGAATGGTATTCTCACTTTGAC
TTTGATCTCCTTGATCCTGTTGGTTTCTCAGGGAGTATTGCTAAAATGCCAAAAAGGAAGTTGTTCAAATGCCAC
TCAGTATGAGGACACTGGAGATCTAAAAGTGAATAATGGCACAAGAAGAAATATAAGTAATAAGGACCTTTGTGC
TTCGAGATCTGCAGACCAGACAGTACTATGCCAATCAGAATGGCTCAAATACCAAGGGAAGTGTATTGGTTCTC
TAATGAGATGAAAAGCTGGAGTGACAGTTATGTGTATTGTTTGGAAAGAAAATCTCATCTACTAATCATACATGA
CCAACCTTGAAATGGCTTTTATACAGAAAAACCTAAGACAATTAAACTACGTATGGATTGGGCTTAACCTTACCTC
CTTGAAAATGACATGGACTTGGGTGGATGGTTCTCCAATAGATTCAAAGATATTCTTCATAAAGGGACCAGCTAA
AGAAAACAGCTGTGCTGCCATTAAGGAAAGCAAAATTTTCTCTGAAACCTGCAGCAGTGTTCATGATTGTTG
TCAGTATTAGAGTTTGACAAAATTCACAGTGAAATAATCAATGATCACTATTTTGGCCTATTAGTTTCTAATAT
TAATCTCCAGGTGTAAGATTTTAAAGTGCAATTAAATGCCAAAATCTCTCTCCCTTCTCCCTCCATCATCGACA
CTGGTCTAGCCTCAGAGTAACCCCTGTTAACAACTAAAATGTACACTTCAAATTTTACGTGATAGTATAAAC
CAATGTGACTTCATGTGATCATATCCAGGATTTTATTTCGTCGCTTATTTTATGCCAAATGTGATCAAATTATGC
CTGTTTTTCTGTATCTTGCGTTTTAAATTCTTAATAAGGTCCTAAACAAAATTTCTTATATTTCTAATGGTTGAA
TTATAATGTGGGTTTATACATTTTTTACCCTTTTGTCAAAGAGAATTAACTTTGTTCAGGCTTTTGCTACTCT
TCACTCAGCTACAATAAACATCCTGAATGTTTTCTTAAAAA

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FIGURE 1098

MQDEERYMTLNVQSKKRSSAQTSQLTFKDYSVTLHWYKILLGISGTVNGILTTLISLILLVSQGVLLKCQKGSC
SNATQYEDTGDLKVNNGTRRNISNKDLCASRSADQTVLCQSEWLKYQGKCYWFSNEMKSWSDSYVYCLERKSHLL
IIHDQLEMAFIQKNLRQLNYVWIGLNFTSLKMTWTWVDGSPIDSKIFFIKGPAKENSCAAIKESKIFSETCSSVF
KWICQY

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FIGURE 1099A

GAAGGCGTCCCGGCATCGGCCAAGATTCTACATTGCTCATCTGGGCATCTGAGCCTCCTTCGAAGTTTCTGTCA
 CAACTGTCTCTTTGACAGCAATGGATGAGGAGGAAGACAATCTGTCTCTGCTGACCGCACTGCTGGAAGAAAATGA
 GTCAGCCTTGGATTGTAATTCAGAAGAAAATAAATTCTTGACGCGGGAAAATGGCGAGCCCGACGCATTTGATGA
 GCTCTTTGATGCCGACGGCGACGGTGAATCTTATACAGAAGAGGCTGATGATGGAGAAACAGGAGAGACAAGAGA
 CGAAAAGGAAAATCTGGCCACTCTCTTTGGAGATATGGAGGACTTAACAGATGAAGAAGAAGTTCCCGCATCACA
 GTCAACTGAAAATAGGGTCTCTCCCTGCTCCTGCCCCAGGCGAGAGAAAACGAATGAAGAGTTGCAAGAGGAATT
 AAGGAATTTGCAAGAGCAAATGAAGGCCTTACAAGAGCAGCTAAAAGTAACAACAATTAAACAGACAGCAAGCCC
 AGCCCGTCTGCAAAAATCCCCTGAGAAGTCTCCCCGGCCACCTCTTAAGGAGAGGAGAGTTTACAGAGAATTCAGGA
 GTCAACATGCTTTTCTGCGGAGCTTGATGTCCCTGCGCTACCAAGAACCAAGAGGGTGGCTCGAACACCAAAGCC
 TTCACCTCCAGATCCCAAAAGCTCATCTTCAAGGATGACAAGTGCACCTCCCAACCCCTACAGACGATTTCTCG
 GAACAAACCTAGTGGGATAACTAGAGGTCAAATTGTGGGGACCCAGGAAGTTCTGGGGAAACGACTCAACCCAT
 CTGTGTGGAAGCCTTCTCTGGTCTGCGGCTCAGGCGGCCTCGAGTATCCTCCACAGAAATGAACAAGAAAATGAC
 CGGCCGAAAACCTGATCAGACTGTCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTGGAAGAAATAGATTGGGT
 GACATTTGGGGTTATATTGAAGAAGGTTACGCCACAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAACT
 GAATGATCTTCGTGACCTGACACAATGTGTGCTTGTCTTATTGAGAGAAGTTTACAAAAGCGCTCTGGAAGAC
 GGAGCAGGGGACTGTCTGATGGGATCCTCAATGCCAACCCCATGAAGCCCCAAGGATGGTTTACAGAGGAGGTGTGTTT
 ATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAGAAGAA
 GAATGGAGAGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGAGTACTGTGAGTACCATGTCCAGGCTCAGTA
 CAAGAAGCTCAGTGCAAAGCGTGCGGATCTGCAGTCCACCTTCTCTGGAGGACGAATTCCAAAGAAGTTTGCCCG
 CAGAGGCACCAGCCTCAAAGAACGGCTGTGCCAAGATGGCTTTTACTACGGAGGGGTTTCTTCTGCCTCGTATGC
 AGCTTCAATTGCAGCAGCTGTGGCTCCTAAGAAGAAGATTCAAACCACTCTGAGTAATCTGGTTGTTAAGGGCAC
 AAACCTTGATCATCCAGGAAACACGGCAAAAACCTCGGAATACCCCAAGAGCCTGTCTTGCTCTGAGGAGTTCAA
 GGAACCTGATGGACCTGCCGACGTGTGGAGCCAGGAACCTTAAACAACATTTAGCCAAAGCCTCAGCTTCAGGGAT
 TATGGGGAGCCCAAAACCAGCCATCAAGTCCATCTCGGCCTCAGCACTCTTGAAGCAACAGAAGCAGCGGATGTT
 GGAGATGAGGAGAAGGAAATCAGAAGAAATACAGAAGCGATTTCTGCAGAGCTCAAGTGAAGTTGAGAGCCCAGC
 TGTGCCATCTTCATCAAGACAGCCCCCTGCTCAGCCTCCACGGACAGGATCCGAGTTCCCCAGGCTGGAGGGAGC
 CCCGGCCACAATGACGCCCAAGCTGGGGCGAGGTGTCTTGGAAGGAGATGATGTTCTCTTTTATGATGAGTCACC
 ACCACCAAGACCAAACTGAGTGTCTTAGCAGAAGCCAAAAGTTAGCTGCTATCACCAAATTAAGGGCAAAAGG
 CCAGGTTCTTACAAAAACAAACCCAAACAGCATTAAAGAAGAAACAAAAGGACCCTCAGGACATCCTGGAGGTGAA
 GGAACGTGTAGAAAAAACACCATGTTTTCTTCTCAAGCTGAGGATGAATTGGAGCCTGCCAGGAAAAAAGGAG
 AGAACAACCTGCCTATCTGGAATCTGAGGAATTTAGAAAATCCTAAAAGCAAAATCAAAACACACAGGCATCCT
 GAAAGAGGCCGAGGCTGAGATGCAGGAGCGCTACTTTGAGCCACTGGTGAAAAAGAACAATGGAAGAAAAGAT
 GAGAAACATCAGAGAAGTGAAGTGCCGTGTGCTGACATGCAAGACGTGCGCCTATACCCACTTCAAGCTGCTGGA
 GACCTGCGTCAGTGAGCAGCATGAATACCACTGGCATGATGGTGTGAAGAGGTTTTTCAAATGTCCCTGTGGAAA
 CAGAAGCATCTCCTTGGACAGACTCCCGAACAAGCACTGCAGTAACTGTGGCCTCTACAAATGGGAACGGGACGG
 AATGCTAAAGGTATGCCATTTGCGTACTAATTTTTGACTCCTTTTAGTGACCCATGCTAATAATGTGGAACCATC
 TCCTATTAAAAATATTTTCATTTTTCTAGGAAAAGACTGGTCCAAAAGATAGGAGGAGAACTCTGTTACCAAGAGG
 AGAAGAACATGCTAAATTTCTGAACAGCCTTAAATAACCCGAACCTTACAGACATTTTCCACAGACTTCCTGGCCT
 CCTGTGACTCTGGAAGCAAAGGATTGGCTGTGTATTGTCCATTGATTCCCTGATTGACGCCGTCAAAAACAAATG
 CTTGTTAAGCCCATAAGCTTTGCCTGCTTACTTTCTGCCATTGGGTTGGTTTGATACCACATTTAACATTGACAT
 TTAAGTGGAAAAACCAAGTTATCATTGTCTTTTCTAAGCTCAGTGTGGATGATTGCATTACTTCATTCACTGAAGT
 TTTTGCCCAAAAATTGGAAGGTAAACAGAGAGCTATGTTTCTGTATCTTTTGTTTATAGAGTGTTCATTCTTTA
 TCATAACAAAATTTCTAGTGTTTATACGAACACCCAGAGGCAAAAGAAATTTGGCTTAATTCTCACTCCAGGTAAGT
 AGCTTAACTTCTGGGCTTCAGTTTTCTCATCTGTAAAATCAGGAAGATTGGACTAAGTGATCCTGAAATGTATTT
 TTTAGCACTGGATTTCTACAAATAATAAACTTTCCCATCTAGATAATGATGATCACATAGTCTTGATGTACGGA
 CATTAAAAGCCAGATTTCTTCATTCAATTCTGTTATCTCTGTTTTACTCTTTGAAATTGATCAAGCCACTGAATC
 ACTTTGCATTTTCAAGTTTATATATAGAGAGAGAAAGAAGGCTGTCTGCTCTTACATTATTGTGGAGCCCTGTGATA
 GAAATATGTAAATCTCATATTATTTTTTTTTTAAATTTTTTTATTTTTTATGACAGGGTCTCACTATGTCACCTT

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FIGURE 1099B

GGCTGGAGTGCAGTAGTGCATCGCGGCACACTGCAGCCTTGGCTTCCCTGGGCTCAAGCAGTCCTCCCACCTCA
GTCTCCCAAATAGCTAGGACTACAGGCGTGCGTGACCAAGCCCAGCTAATTTTTGCATTTTTTTGTAGAGATGGGG
TTTTGCCATGTTGCTCAGGCTGGTCTCAAACCTCTGAGCACTAGCAATCCACCCACCTCTGTTTCCAAAAAAAAA
AAAAAATGAAAGGTCAACCCCTATGCAAATTACCACAGCAAAGGTTTCATTAGGAGATTCTTCCATCTGGGCA
ACCTGGTTTTTCCAAATATCATTTTGACCTAAGTGAATGTTGATACTAGCTAAAGATTGGGTAAATTGGTTGAATTA
TTGTATTGAAGCTTGAGCTGTAGCTAAAAGTAATTTAGGTTTTCCCTAAGATGTTATTATGTTAGGGACATAACA
CTTTTGGGAGGTTGTTGTGGGAGATGGTTGATTTAGGTTTTCAAAGCTAGAAATAAAATTTACATGCCTTAGAT
TTCATAAAATTTCTGCTCTAATTGGGTGGAAGGTGCTGTATCTAACTTGTGTTCCCTCCTAAGGTTATGTCCTAATA
ACTATTCTTTTAGGAGTATACTTCTACTTTATAGAAGGTTGCTTTTCTTTTAAATTTTTCTAACAAAGAAAAGA
ATAAAGTATTTATTAATAAGAACCAGAAAGCACTTGAACTGATGTTTTTAATGGCTCATTAGGGTAGATTTAT
TTATCTCATTAACCTAAACAGCTATGTGTATGAAATAGGTCACAACAGAACTTGAACACCAGGTTGGTGTCTGA
GCAATCCCTTTCTTATGGGAAAAACAATGTTCTTGTGTTGAACAGAGGGTATCATTGCAGTCAGTATTCACGTGTA
TATTGTTATATAAGTTGTATAATATGCTTGTAAGGCTGAGGGTGAGCTGTATCTGGATGCCTTTTTACAATTTG
ATTTTAACTTTTAAATAAATTTAAACATAAAAAAAAAAAAAAA

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FIGURE 1100

MDEEDNLSLLTALLEENESALDCNSEENNFLTRENGEPDAFDELFDADGDGESYTEEADDGETGETRDEKENLA
TLFGDMEDLTDEEEVPASQSTENRVLPAPAPRREKTNEELQEELRNLOEQMKALQEQLKVTTIKQTASPARLQKS
PEKSPRPPLKERRVQRIQESTCFSAEILDVPALPRTKRVARTPKPSPPDPKSSSSSRMTSAPSQPLQTI SRNKPSGI
TRGQIVGTPGSSGETTQPICVEAFSGLRLRRPRVSSTEMNKKMTGRKLIRLSQIKEKMAREKLEEIDWVTFGVIL
KKVTPQSVNSGKTFSIWKLNDLRDLTQCVSLFLFGEVHKALWKTEQGTVVGILNANPMKPKDGSSEEVCLSIDHPQ
KVLIMGEALDLGTCKAKKKNGEPTQTVNLRDCEYCYHVQAQYKKLSAKRADLQSTFSGGRI PKKFARRGTSLK
ERLCQDGFYYGGVSSASAYAASIAAAVAPKKKIQTTLNLVVKGTNLIIQETRQKLGIPQKSLSCSEEFKELMDLP
TCGARNLKQHLAKASASGIMGSPKPAIKSISASALLKQKQRMLEMRRRKSEEIQRFLQSSSEVESPAVPSSSR
QPPAQPPRTGSEFPRLGAPATMTPKLGRGVLEGDDVLFYDESPPPRPKLSALAEAKKLAAITKLRAKGQVLT KT
NPNSIKKKQKDPQDILEVKERVEKNTMFSSQAEDELEPARKKRREQLAYLESEEFQKILKAKSKHTGILKEAEAE
MQERYFEPLVKKEQMEEKMRNIREVKCRVVTCKTCAYTHFKLLETVCVSEQHEYHWHHDGVKRFFKCP CGNRSISLD
RLPNKHCSNCGLYKWERDGM LKVCHLRTNF

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FIGURE 1101

ACCGTCTTCCGCCGCACGTGGATTGAGCGCGATGCCCAAATCCAAGCGCGACAAGAAAGTCTCCTTAACCAAAAC
TGCCAAGAAAGGCTTGGAATTGAAACAAAACCTGATAGAAGAGCTTCGGAAATGTGTGGACACCTACAAGTACCT
TTTCATCTTCTCTGTGGCCAACATGAGGAACAGCAAGCTGAAGGACATCCGGAACGCCTGGAAGCACAGCCGGAT
GTTCTTTGGCAAAAACAAGGTGATGATGGTGGCCTTGGGTTCGGAGCCCATCTGATGAATACAAAGACAACCTGCA
CCAGGTCAGCAAAAGGTTGAGGGGTGAGGTGGGTCTCCTGTTACCAACCGCACAAAGGAAGAGGTGAATGAGTG
GTTACGAAATACACAGAAATGGACTACGCCCCGAGCTGGTAACAAAGCAGCTTTCACTGTGAGCCTGGATCCAGG
GCCCCGAGCAGTTCCCCCACTCCATGGAGCCACAGCTCAGGCAGCTGGGCCTGCCCACCGCCCTCAAGAGAGG
TGTGGTGAATCTGCTGTCTGACTACGAGGTGTGCAAGGAGGGCGATGTGCTGACCCAGAGCAGGCTCGCGTCCT
GAAGCTTTTTGGGTATGAGATGGCTGAATTCAAGGTGACCATCAAATACATGTGGGATTACAGTCGGGAAGGTT
CCAGCAGATGGGAGACGACTTGCCAGAGAGCGCATCTGAGTCCACAGAAGAGTCAGACTCAGAAGATGATGACTG
AAAGGGACTCGGGACTGAAGGTCTCCTGGAAGCTTCTGGGTCTCACTGGACCATCAGGACTGCTGCCGCCCTCT
GGAGAGAGCAGCTTTTTATTTGTCTGTAGACAGGGAACATGATGGGCACTGACCTCCTGTAAAGAATAAACTGT
GGGCCGGGCGCGGTGGCTCACGCCTGGAATCCCAGCACTTTGGGAAGCCGAGGTGGGCAGATCATAAGGTCAGGA
GATTAAGACCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATAGAAAAAAAAGTAGTTGGGCATAG
TGGCATGTGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGAGGTGGAGGTTG
CCGTGAGTTGAGATTGGACCACTGCTCTCCAGCCTGGGCAACAGAGTAAACTCTGTCCC

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FIGURE 1102

MPKSKRDKKVS LTKTAKKGLELKQNLIEELRKCVDTYKYLFI FSVANMRNSKLKDIRNAWKHSRMFFGKNKVMV
ALGRSPSDEYKDNLHQVSKRLRGEVGLLFTNRTKEEVNEWFTKYTEM DYARAGNKAAFTVSLDPGPLEQFP HSME
PQLRQLGLPTALKRGVVTL LSDYEVCKEGDVLTP EQARVLKLF GYEMAEFKVTIKYMWDSQSGRFQQMGDDL PES
ASESTEESDSEDD

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FIGURE 1103

GAGGCGGGAGGATGAAGTTGATTGACTATGGTCTCTCCGGCTACCAGGAAGAGTCTGCCGAAGGTGAAGGCCATG
GACTTCATCACCTCCACAGCCATCCTGCCCCCTGCTGTTTCGGCTGCCTGGGCGTCTTCGGCCTCTTCCGGCTGCTG
CAGTGGGTGCGCGGGAAGGCCTACCTGCGGAATGCTGTGGTGGTGATCACAGGCGCCACCTCAGGGCTGGGCAA
GAATGTGCAAAAGTCTTCTATGCTGCGGGTGCTAAACTGGTGCTCTGTGGCCGGAATGGTGGGGCCCTAGAAGAG
CTCATCAGAGAACTCACCGCTTCTCATGCCACCAAGGTGCAGACACACAAGCCTTACTTGGTGACCTTCGACCTC
ACAGACTCTGGGGCCATAGTTGCAGCAGCAGCTGAGATCCTGCAGTGCTTTGGCTATGTGACATACTTGTCAAC
AATGCTGGGATCAGCTACCGTGGTACCATCATGGACACCACAGTGGATGTGGACAAGAGGGTCATGGAGACAAAC
TACTTTGGCCCAGTTGCTCTAACGAAAGCACTCCTGCCCTCCATGATCAAGAGGAGGCAAGGCCACATTGTGCGC
ATCAGCAGCATCCAGGGCAAGATGAGCATTCTTTTTCGATCAGCATATGCAGCCTCCAAGCACGCAACCCAGGCT
TTCTTTGACTGTCTGCGTGCCGAGATGGAACAGTATGAAATTGAGGTGACCGTCATCAGCCCCGGCTACATCCAC
ACCAACCTCTCTGTAAATGCCATCACCGCGGATGGATCTAGGTATGGAGTTATGGACACCACCACAGCCCAGGGC
CGAAGCCCTGTGGAGGTGGCCCAGGATGTTCTTGCTGCTGTGGGGAAGAAGAAGAAAGATGTGATCCTGGCTGAC
TTACTGCCTTCCTTGGCTGTTTATCTTCGAACTCTGGCTCCTGGGCTCTTCTTCAGCCTCATGGCCTCCAGGGCC
AGAAAAGAGCGGAAATCCAAGAACTCTAGTACTCTGACCAGCCAGGGCCAGGGCAGAGAAGCAGCACTCTTAGG
CTTGCTTACTCTACAAGGGACAGTTGCATTTGTTGAGACTTTAATGGAGATTTGTCTCACAAGTGGGAAAGACTG
AAGAAACACATCTCGTGAGATCTGCTGGCAGAGGACAATCAAAAACGACAACAAGCTTCTTCCAGGGTGAGGG
GAAACACTTAAGGAATAAATATGGAGCTGGGGTTTAACACTAAAACTAGAAATAAACATCTCAAACAGTAAGAG
TTGTAGTCTTCCAGGACTAGAACCTTGTGTCCTTTGAATTCTCGCCCTGCCAGCTCCTAGAAATAGTTTCAATCT
TGGAATCAGATGTTATGTCACCTGAAA

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FIGURE 1104

GGCACGAGGGCCAGGAACGCCAGCCGTTACGCGTTCGGTCCTCCTTGGCTGACTCACCGCCCTCGCCGCCGCAC
CATGGACGCCCCCAGGCAGGTGGTCAACTTTGGGCCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTTGTTAGAGAT
ACAAAAGGAATTATTAGACTACAAAAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGC
CAAGATTATTAACAATACAGAGAATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACATAAGGTGATTTTTCT
GCAAGGAGGTGGGTGCGGCCAGTTCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCGGA
CTATGTGGTGACAGGAGCTTGGTCAGCTAAGGCCGCAGAAGAAGCAAGAAGTTTGGGACTATAAATATCGTTCA
CCCTAAACTTGGGAGTTATACAAAATTCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTA
TTATTGCGCAAATGAGACGGTGATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTG
TGACATGTCCTCAAACCTTCCTGTCCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAA
GAATGTTGGCTCTGCTGGGGTCACCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCC
CTCGGTCTTGGAAATACAAGGTGCAGGCTGGAACAGCTCCTTGTAACAACACGCCTCCATGTTTCAGCATCTACGT
CATGGGCTTGGTTCTGGAGTGGATTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATC
TCAAACAATTTATGAGATTATTGATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAA
GATGAATATTCCATTCCGCATTGGCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCT
TGAATCAATATGTTGTCTTGAAAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCAC
AATTGAAGACGTTCAGAAGCTGGCCGCCTTCATGAAAAAATTTTTGGAGATGCATCAGCTATGAACACATCCTAA
CCAGGATATACTCTGTTCTTGAACAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAG
TATTTTTCTCAAATGAACATGTTTATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCT
GTAAAGCTGGTGGGACCTAATGTCACCTTAATTCTGACTTGAAGTGAAGCATTTTAAGAAATCTTGTTGCTTTT
CTAACAAATTCCCGCGTATTTTGCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTTGCTGTGGACTTAAT
AATGCAAGTTGCGATTAATTATTTCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGC
TGAATCTACACATCTGTGGGGTCTCCTGGGTTCAGCGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGT
GGTTTAAGAGTGCCAGGCGAAGGGCAAACCTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTT
TATATATGTTTATATTAGCAAGGTCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATA
ATACAGTTATCACTGATATATGTAGACACTTTTAGAATTTATTAAATCCTTGACCTTGTGCATTATAGCATTCCA
TTAGCAAGAGTTGTACCCCTCCCGAGTCTTCGCCTTCCTCTTTTAAAGCTGTTTTATGAAAAAGACCTAGAAGT
TCTTGATTCATTTTTACCATTCTTTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTCAATTATGCCA
TTAAACTAAACATTTCTGTAAATTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGA
GTGATACTTTGCTGAAAAGTCTTTCCCTATTGTTTATCTATTGTGCTAGTATTTTATGTTGAATATGTAAAGAACA
TTAAAGTCCTAAACATCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1105

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRVGGIRASLYNAVTTIEDVQKLAAFMKKFLEMHQL

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FIGURE 1106

GGAGGGCCCGGCGGACAGCGGAGGCAGAGAGGAAGGCGGTTCTGAGAGCTTCAGAGAGCGATGGAAAGCAAAA
TGGGTGAATTGCCTTTAGACATCAACATCCAGGAACCTCGCTGGGACCAAAGTACTTTCCCTGGGCAGAGCCCCGGC
ACTTTTTCACTGTTACTGATCCTCGAAATCTGCTGCTGTCCGGGGCACAGCTGGGAAGCTTCTCGGAACATCGTGC
AGAACTACAGGGCCCGGCGTGGTGACCCAGGGATCACCGAGGACCAGCTGTGGAGGGCCAAAGTATGTGTATGACT
CCGCCTTCCATCCGGACACAGGGGAGAAGGTGGTCCCTGATTGGCCGCATGTCAGCCCAGGTGCCCATGAACATGA
CCATCACTGGCTGCATGCTCACATTCTACAGGAAGACCCCAACCGTGGTGTCTGGCAGTGGGTGAATCAGTCCT
TCAATGCCATTGTIAACTACTCCAACCGCAGTGGTGACACTCCCATCACTGTGAGGCAGCTGGGGACAGCCTATG
TGAGTGCCACCACCTGGAGCTGTGGCCACGGCCCTGGGACTCAAATCCCTCACCAAGCACCTGCCCCCTTGGTGC
GCAGATTTGTGCCCTTTGCAGCAGTGGCAGCTGCCAACTGCATCAACATCCCCCTGATGAGGCAGAGAGAGCTGC
AGGTGGGCATCCCGGTGGCTGATGAGGCAGGTGAGAGCTTGGCTACTCGGTGACTGCAGCCAAGCAGGGAATCT
TCCAGGTGGTGAATTTCAAGAATCTGCATGGCGATTCTGCCATGGCCATCCCACCACTGATCATGGACACTCTGG
AGAAGAAAGACTTCCTGAAGCGCCGCCCTGGCTGGGGGCACCCCTGCAGGTGGGACTGGTGGGCTTCTGCCTGG
TATTTGCAACCCCCCTGTGCTGTGCCCTATTCCCCCAGAAGAGCTCCATACACATAAGCAACCTGGAACCAGAGC
TGAGAGCTCAGATCCATGAGCAAAACCCCAGCGTTGAAGTGGTCTACTACAACAAGGGGCTTT**TGAGG**AGGGTCAG
CCTCTGTCCCCCTCCCTCACTTCCTTGGGCTGCTGCTTTAGTGGAGTCATGTCACCCCTACCCTTGGCTATCTGC
CTAGCACTGGGCAGGGGCCCTTGGTGGGCAGATGGCAATTGAGGGTAGCAACCTATTAGGGTGGGGGAGGGACCTC
CATAAGGCTTTTCCCTCCCTTCTCTGGTTTTCAAAGATCAGAGCACATAACCCCTCCTGTGCTTGAGTGTCCATGCA
TATACATACATGATACACATGTGTATGTGTACATTGGGTCTGAAAGCTAGAAGCAGGCATGCTAGCCTAGTATG
TTCTGACATCTGGCTTCCCTTCTCAGCCTCATGTCCACCTGCCTGCCAGCCAGGCTACAGGTGTGACTTCTTCT
CTAAACTGTTACACCAGCCAAGTTATTTTTTGATGGCACCTCATCCCTTCTAGAAATAGGAGGAGCCCCAGGATCT
CAGGACAGAGACTTATAGACACTAGTAGGACAAAGCGGGCTGAATCCCTCAGGTTTCTGATACCTAGCTCCCCAA
GCTGACTGGGCTGGCAGAGGAGAACATGTTGAGACAAGGGAGGCAGGGGACTTATGCATCCCTCAGTGCCATCCC
TTGTATCCTGGAATAGCTCCATTTCCCCTCCTCCTCTCTACCAGACAAAGGAGTGCCTGTGTCTGTACTGCCCT
CGCTGTCTCCCCCACCACCCTACTTGACAGCGTGGGCATCTTCAGGCACAGCCTTGGGAGTTCCTGGTGTGCTCT
GACATCATGACCTCAAATCTAAATCCTCCAATCCCAACTCCCTTTCCCAAACAAAAAGCCACAGAGGCAGAGCAA
GCATTCCCCTTTAAGAGCTTCCACTGCACCCCTCCCAAGGGACACAGCGGTAGGAATGGTGCTTAAACTCCACA
GGTATCAGAGAGGGTGTAAGTACAGACATCCTCAAGGGCAGCTAGGCCCCGAATGTACAATGTTAAGACAGGGAAT
TTTGTGTTCCATTGACTTTTTTTTTTTTTTTTAAATGGAGTTTCACTATTTTGCCAGGCTGGAGTGCATGGTGC
GATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCTTGCCTCAGTCTCCCGAGTAGTGGAAT
TACAGGTGTGTGCTACCACATCTTGCTAGTTTTGTATTTTAGCAGAGATGGGGGTTTACCATGTTGGCCAGGC
TAGTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGCACTGGGATTACAAGCATGAGCCA
CTGTGCCCAGCCTGTTCCACTGACATTTCTTAGACATTACAGAAAACCCCCACCTTAACCTCTTTTCTTTCTTGA
GGGTGGTCTGTCCCCACCTCCACCCTCCCACCCCTGGAAGAGGAAGGGCCCGGGCATCAGTGGCTAGTCCAA
ATAAAATATGGGCTTGGGGATGGAATGGGTGGTGGTAAGTTCACAGAGTGTAGTTAGATCCCAACTCCCATGACC
TCTGGCTTCAGTGGTGGGTGGGGCAGGGCAGATGAAAGGGCTTCAGTGGGAACCTCTGAGAGCATTTTCTGTTC
CCCCTATCAACCGCCCCCAGTGATAACATCTGTGAAGCCAGCCATTACTCAATAAACTGCAAACCTTGTCTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1107

MGELPLDINIQEPRWDQSTFLGRARHFFTVTDPRNLLLSGAQLEASRNIVQNYRAGVVTPGITEDQLWRAKYVVD
SAFHPDTGEKVVLIGRMSAQVPMNMTITGCMLTFYRKTPTVVFWQWVNQSFNAIVNYSNRSGDTPITVRQLGTAY
VSATTGAVATALGLKSLTKHLPPLVGRFVPFAAVAAAANCINIPLMRQRELQVGIPVADEAGQRLGYSVTAAKQGI
FQVVISRICMAIPAMAIPPLIMDTLEKKDFLKRRPWLGAQLQVGLVGFCCLVFATPLCCALFPQKSSIHISNLEPE
LRAQIHEQNPSVEVVYYNKGL

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FIGURE 1108

GTGCTTTACTGCGCGCTCTGGTACTGCTGTGGCTCCCCGTCTGGTGCGGGACCTGTGCCCCGCGCTTCAGCCCT
CCCCGCACAGCCTACTGATTCCCCTGCCGCCCTTGCTCACCTCCTGCTCGCCATGGAGTTCGCTGGTTTTTCGCGCG
GCGCTCCGGCCCCACTCCCTCGGCCGAGAGCTAGCCCCGGCCGCTGGCGGAAGGGCTGATCAAGTCGCCCAAGCC
CCTAATGAAGAAGCAGGCGGTGAAGCGGCACCACCACAAGCACAACCTGCGGCACCCTACGAGTTCCTGGAGAC
CCTGGGCAAAGGCACCTACGGGAAGGTGAAGAAGGCGCGGGAGAGCTCGGGGCGCCTGGTGGCCATCAAGTCAAT
CCGGAAGGACAAAATCAAAGATGAGCAAGATCTGATGCACATACGGAGGGAGATTGAGATCATGTCATCACTCAA
CCACCCTCACATCATTGCCATCCATGAAGTGTGTTGAGAACAGCAGCAAGATCGTGATCGTCATGGAGTATGCCAG
CCGGGGCGACCTTTATGACTACATCAGCGAGCGGCAGCAGCTCAGTGAGCGCGAAGCTAGGCATTTCTTCGGGCA
GATCGTCTCTGCCGTGCACTATTGCCATCAGAACAGAGTTGTCCACCGAGATCTCAAGCTGGAGAACATCCTCTT
GGATGCCAATGGGAATATCAAGATTGCTGACTTCGGCCTCTCCAACCTCTACCATCAAGGCAAGTTCCTGCAGAC
ATTCTGTGGGAGCCCCCTCTATGCCTCGCCAGAGATTGTCAATGGGAAGCCCTACACAGGCCCAGAGGTGGACAG
CTGGTCCCTGGGTGTTCTCTCTACATCCTGGTGCATGGCACCATGCCCTTTGATGGGCATGACCATAAGATCCT
AGTGAAACAGATCAGCAACGGGGCCTACCGGGAGCCACCTAAACCCTCTGATGCCTGTGGCCTGATCCGGTGGCT
GTTGATGGTGAACCCACCCGCCGGGCCACCCTGGAGGATGTGGCCAGTCACTGGTGGGTCAACTGGGGCTACGC
CACCCGAGTGGGAGAGCAGGAGGCTCCGCATGAGGGTGGGCACCCTGGCAGTGACTCTGCCCCGCGCCTCCATGGC
TGACTGGCTCCGGCGTTCTCCCGCCCCCTCCTGGAGAATGGGGCCAAGGTGTGCAGCTTCTTCAAGCAGCATGC
ACCTGGTGGGGGAAGCACCACCCTGGCCTGGAGCGCCAGCATTGCTCAAGAAGTCCCGCAAGGAGAATGACAT
GGCCAGTCTCTCCACAGTGACACGGCTGATGACACTGCCCATCGCCCTGGCAAGAGCAACCTCAAGCTGCCAAA
GGGCATTCTCAAGAAGAAGGTGTGAGCCTCTGCAGAAGGGGTACAGGAGGACCCTCCGGAGCTCAGCCCAATCCC
TGCGAGCCCAGGGCAGGCTGCCCCGCTGCTCCCCAAGAAGGGCATTTCTCAAGAAGCCCCGACAGCGCAGTCTGG
CTACTACTCCTCTCCCGAGCCCAGTGAATCTGGGGAGCTCTTGACGCAGGCGACGTGTTTGTGAGTGGGGATCC
CAAGGAGCAGAAGCCTCCGCAAGCTTCAGGGCTGCTCCTCCATCGCAAAGGCATCCTCAAACCTCAATGGCAAGTT
CTCCCAGACAGCCTTGAGGCTCGCGGCCCCCACCACCTTCGGCTCCCTGGATGAAGTTCGCCCCACCTCGCCCCCT
GGCCCCGGGCCAGCCGACCCTCAGGGGCTGTGAGCGAGGACAGCATCCTGTCTCTGAGTCTTTGACCAGCTGGA
CTTGCTGAACGGCTCCAGAGCCCCCACTGCGGGGCTGTGTGTCTGTGGACAACCTCACGGGGCTTGAGGAGCC
CCCCTCAGAGGGCCCTGGAAGCTGCCTGAGGCGCTGGCGGCAGGATCCTTTGGGGGACAGCTGCTTTTCCCTGAC
AGACTGCCAGGAGGTGACAGCGACCTACCGACAGGCACTGAGGGTCTGCTCAAAGCTCACCTTGAGTGGAGTAGGC
ATTGCCCCAGCCCGGTGAGGCTCTCAGATGCAGCTGGTTGCACCCCGAGGGGAGATGCCTTCTCCCCACCTCCC
AGGACCTGCATCCAGCTCAGAAGGCTGAGAGGGTTTGAGTGGAGCCCTGAGCAGGGCTGGATATGGGAAGTAG
GCAAATGAAATGCGCAAGGGTTGAGTGTCTGTCTTCAGCCCTGCTGAACGAAGAGGATACTAAAGAGAGGGGAA
CGGGAATGCCCCGACAGAGTCCACATTGCCTGTTTCTGTGTACATGGGGGGGCCACAGAGACCTGGAAAGAGA
ACTCTCCAGGGCCCATCTCCTGCATCCCATGAATACTCTGTACACATGGTGCCTTCTAAGGACAGCTCCTTCCC
TACTATTCCCTGCCCAGTGGGGCCAGACCTCTTTACACACACATTCCCGTTTCTACCAACCACCAGAACTGGA
TGGTGGCACCCCTAATGTGCATGAGGCATCCTGGGAATGGTCTGGAGTAACGCTTCGTTATTTTTATTTTTATTT
TTATTTATTTATTTATTTTTTTTGGAGACGGAGTTTCGCTCTTGGTGCCAGGCTAGAGTGCAATGGCGCGATCTCA
GCTCACCTCAACCTCCGCCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCTAGTAGCTGGGATTACAGGC
GCCCCGCCACCATGCCCCGCTAATTTTGTATTTTGTAGTAGAGACAGGGTTTCTCCATGTTGGTCAGGCTGGTCTCA
AACTCCCGACCTCAGGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCC
CACCTAACCTTCCTTATTTAGCCTAGGAGTAAGAGAACACAATCTCTGTTTCTTCAATGGTTCTCTTCCCTTTT
CCATCCTCCAAACCTGGCCTGAGCCTCCTGAAGTTGCTGCTGTGAATCTGAAAGACTTGAAAAGCCTCCGCTGC
TGTGTGGACTTCATCTCAAGGGGGCCAGCCTCCTCTGGACTCCACCTTGACCTCAGTGACTCAGAATCTTGCC
TCTAAGCTGCTCTAAAGTCCAGACTATGGATGTGTTCTCTAGGCCTTCAGGACTCTAGAATGTCCATATTTATTT
TTATGTTCTTGGCTTTGTGTTTTAGGAAAAGTGAATCTTGCTGTTTTCAATAATGTGAATGCTATGTTCTGGGAA
AATCCACTATGACATCTAAGTTTTGTGTACAGAGAGATATTTTGAACCTATTTCCACCTCCTCCACAACCCCC
CACACTCCACTCCACACTCTTGAGTCTCTTTACCTAATGGTCTCTACCTAATGGACCTCCGTGGCCAAAAAGTAC
CATTAAAACCAGAAAGGTGATTGGAAAAA

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FIGURE 1109

MESLVFARRSGPTPSAAELARPLAEGLIKSPKPLMKKQAVKRHHKHNLRHRYEFLETLGKGTYGKVKKARESSG
RLVAIKSIRKDKIKDEQDLMHIRREIEIMSSLNHPHIIAIHEVFENSSKIVIVMEYASRGDLYDYISERQQLSER
EARHFFRQIVSAVHYCHQNRVVHRDLKLENILLDANGNIKIADFGLSNLYHQGKFLQTFCGSPLYASPEIVNGKP
YTGPEVDSWSLGVLLYILVHGTMFPDGHDKIILVKQISNGAYREPPKPSDACGLIRWLLMVNPTRRATLEDVASH
WVNVWGYATRVGEQEAPHEGGHPGSDSARASMADWLRRSSRPLENGAKVCSFFKQHAPGGGSTTTPGLERQHSLK
KSRKENDMAQSLHSDTADDTAHRPGKSNLKLPGILKKKVSASAEQVQEDPPELSPIPASPGQAAPLLPKKGILK
KPRQRESGYYSPEPSESSEGLLDAGDVVSVGDPKEQKPPQASGLLLHRKGILKLNGKFSQTALELAAPTTFGS LD
ELAPPRPLARASRPSGAVSEDSILSSESFDQLDLPERLPEPPLRGCVSVDNLTGLEEPPSEPGSGCLRRWRQDPL
GDSCFSLTDCQEV TATYRQALRVCSKLT

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FIGURE 1110

GGCACGAGGCCTGGGTCCCGTCACATCCTTCTTGCTCAACCACTGGGTGCACAGGATGGAACTTCTATTCCCTC
TCTGGAAGACAGCGCGTGGCTTGGCTTCACAGAGTTGTGGCTGGAGACCGAAGCAGCCCCCTTCTCAGGCTTACT
GTCACCAGTCTGTCTGTGTTAGGGGAGAGGGGAGTCCGCTCTGTCCTGAAGGCCAGAGATGGAAGGACAAGTGG
TAGGCCGGGTGTTCAGGCTCTTCCAACGCCGACTGCTTCACTCCGAGCAGGACCACCCAGGACAATTGAGGGG
AAGCTTTAAAGGAACCAGAAAGGGCCCAGGAGCACTCTTGCCCACTTTGCTGGGGGGCAGCACTTCTTTGAAT
ACCTTCTTGTGGTTTTCTCTCAAAAAGAAGCGTTCAGAGGATGATTACGAGCCTATAATCACCTACCAATTTCCCA
AGCGGGAGAACCTGCTTCGGGGTCAGCAGGAGGAGGAGGAGCGGCTGCTCAAAGCTATCCCCTTGTTCTGCTTCC
CAGATGGGAATGAGTGGGCATCACTCACCGAGTATCCAGGGAGACCTTCTCCTTCGTTCTGACCAATGTGGATG
GGAGCAGAAAGATTGGATACTGCAGGCGCCTCTTGCCCTGCCGGCCCTGGCCCTCGCCTTCCCAAAGTGTACTGCA
TCATCAGCTGCATCGGCTGCTTCGGCTTGTTCTCCAAGATCCTGGATGAAGTGGAGAAGAGACATCAGATCTCCA
TGGCTGTCACTACCCGTTTCATGCAGGGCCTCCGAGAGGCAGCCTTCCCTGCTCCTGGGAAGACTGTCACTCTCA
AGAGCTTCATCCCCGACTCAGGCACTGAGTTCAATTCAGTACACGGCCCCCTGGACTCCCACCTAGAACATGTGG
ATTTTAGTTCTCTATTGCACTGTCTCAGTTTTGAACAGATACTTCAGATCTTTGCCTCTGCCGTGCTGGAGAGAA
AAATCATCTTCTGCGGAAGGTCTCAGCACCTTGCTCAGTGCATCCATGCTGCTGCCGCACTGCTCTACCCCT
TCAGCTGGGCGCACACCTACATCCCTGTTGTCCCTGAGAGCCTTCTGGCCACCGTCTGCTGCCCCACCCCTTCA
TGGTTGGAGTACAAATGCGCTTCCAGCAGGAGGTGATGGACAGCCCTATGGAAGAGGTCTGCTGGTCAATCTTT
GTGAAGGAACCTTCTTAATGTCGGTTGGTGATGAAAAAGACATCCTGCCACCGAAGCTTCAGGATGACATCTTAG
ACTCTCTTGGTCAGGGGATCAATGAGTTAAAGACTGCAGAACAAATCAACGAGCATGTTTCAGGCCCTTTGTGC
AGTTCTTTGTCAAGATTGTGGGCCATTATGCTTCCTATATCAAGCGGGAGGCAAATGGGCAAGGCCACTTCCAAG
AAAGATCCTTCTGTAAAGGCTCTGACCTCCAAGACCAACCGCCGATTTGTGAAGAAGTTGTGAAGACACAGCTCT
TCTCACTTTTTCATCCAGGAAGCCGAGAAGAGCAAGAATCCTCCTGCAGGCTATTTCCAACAGAAAATACTTGAAT
ATGAGGAACAGAAAGAAACAGAAAGAAACCAAGGGAAAAAACTGTGAAAATAAGAGCTGTGGTGAATAAGAATGACTA
GAGCTACACACCATTTCTGGACTTCAGCCCCTGCCAGTGTGGCAGGATCAGCAAACTGTGAGCTCCCAAAATCC
ATATCCTCACTCTGAGTCTTGGTATCCAGGTATTGCTTCAAACCTGGTGTCTGAGATTGGATCCCTGGTATTGAT
TTCTCAGGACTTTGGAGGGCTCTGACACCATGCTCACAGAACTGGGCTCAGAGCTCCATTTTTTGCAGAGGTGAC
ACAGGTAGGAAACAGTAGTACATGTGTTGTAGACACTTGGTTAGAAGCTGCTGCAACTGCCCTCTCCCATCATT
TAACATCTTCAACACAGAACACACTTTGTGGTCGAAAGGCTCAGCCTCTCTACATGAAGTCTGTGGACATGTAAG
GACGAGAGTAAAGAGGAAAATCTTATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1111

MEGQVVGRVFRLLFQRRLLQLRAGPPQDNSSGEALKEPERAQEHSLPNFAGGQHFFEYLLVVSLKKKRSEDDYEP I I
TYQFPKRENLLRGQQEEEEERLLKAIP LFCFPDGN WASL TEYPRETF SFVL TNVDGSRKIGYCRRLLPAGPGPRL
PKVYCIISCIGCFGLFSKILDEVEKRHQISMAVIYPFMQGLREAAFPAPGKTVTLKSFIPDSGTEFISLTRPLDS
HLEHVD FSSLLHCLSFEQILQIFASAVLERKII FLAEG LSTLSQCIHAAAALLYPFSWAHTYIPVVPESLLATVC
CPTPFMVGVMRFQQEVMDSPMEEVLLVNLCEGTFLMSVGDEKDILPPKLQDDILD SLGQG INELKTAEQ INEHV
SGPFVQFFVKIVGHIYASYIKREANGQGHFQERSFCKALTSKTNRRFVKKFVKTQLFSLFIQEAEKSKNPPAGYFQ
QKILEYEEQKKQKKPREKTVK

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FIGURE 1112

TCCCTGTCCTGCGCCCGCGCGCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCC
GCCGTCCAGCCGAGTCCCCACTCCGGAGTCGCCGCTGCCGCGGGGACATGGTCCTCTGCGTTCAGGGGTGAGCAC
CCCCTTGTAAGCTCAGGGCTACTGTTGGGTGTCAGGGAACAAAGTTTTAGACTGCTGCGCTCCAAAGCGGGCACA
CACATGTACCTAGAACACACCAGCCACTGTCCCCACCATGATGATGACACAGCCATGGACACACCCCTGCCCAGA
CCTCGTCCTTTTGCTGGCTGTGGAGCGGACTGGGCAGCGGCCCTGTGGGCCCCGTCCCTGGAAGTGCCCAAGCCA
GTCATGCAGCCCTTGCTGCTGGGGCCTTCCTCGAGGAGGTGGCAGAGGGTACCCAGCCAGACAGAGAGTGAG
CCAAAGGTGCTGGACCCAGAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGG
TATTGGGGTTCCATTACGGCCAGCGAGGCCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGT
GACAGCACGCACCCAGCTACCTGTTACGCTGTGAGTGAACCACTCGTGGCCCCACCAATGTACGCATTGAG
TATGCCGACTCCAGCTTCCGTCTGGACTCCAAGTGTGTCAGGCCACGCATCCTGGCCTTTCGGGATGTGGTC
AGCCTTGTGCAGCACTATGTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCACCCCCG
GCCCTGCCTATGCCTAAGGAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACAC
CTAAAGTGGTGCAGCCCTTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCTTGTGATCAAC
CGTCTGGTGGCCGACGTGGACTGCCTGCCACTGCCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAG
CTCTGACTGTACGGGGCAATCTGCCCCACCTCACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTT
GGGCCCCCACTGTCCCTCCTCCAGGCATCCTGGTGCCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAA
GAGCAAGGCATGGGAGAGGGGAGGTGTCACACAACCTGGAGGTAAATGCCCCAGGCCGCATGTGGCTTCATTAT
ACTGAGCCATGTGTCAGAGGATGGGGAGACAGGCAGGACCTTGTCTACCTGTGGGCTGGGGCCAGACCTCCACT
CGCTTGCCTGCCCTGGCCACCTGAACTGTATGGGCACCTCTCAGCCCTGGTTTTTTCAATCCCCAGGGTCGGGTAGG
ACCCCTACTGGCAGCCAGCCTCTGTTTCTGGGAGGATGACATGCAGAGGAAGTGAATCGACAGTGAAGTAC
CCCTTGTTGAGGGGTAAGCCAGGCTAGGGGACTGCACAATTATACACTATTTATTTATTTATTTCTCCTTGGGGT
GGTGTGAGGGGCGAGCCAACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAGAGACCCCACTCTGCCCTGGCT
TCTCTGGTTCTTCCCTGTGGAAAGCCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCCTGGTA
CTGACCCACCCGTCTGTGAATGTGTCCACTCTCTTCTGCCCCAGCCATATTTGGGGAGGATGGACAACACTACAAT
AGGTAAGAAAATGCAGCCGGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTACCCCTCACAGGACAGAGCTGTAT
CTGCATAGAGCTGGTCTCACTGTGGCGCAGGCCCCGGGGGAGTGCCTGTGCTGTGTCAGGAAGAGGGGGTGCTGGT
TTGAGGGCCACCCTGCAGTTCTGCTAGGTCTGCTTCTGCCCAGGAAGGTGCCTGCACATGAGAGGAGAGAAAT
ACACGTCTGATAAGACTTCATGAAATAATAATTATAGCAAAGAACAGTTTGGTGGTCTTTTCTCTTCCACTGATT
TTTCTGTAATGACATTATACCTTTATTACCTCTTTATTTTATTACCTCTATAATAAAATGATACCTTTTTCATGT
AAAAAAAAAAAAAAAAAA

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FIGURE 1113

MVLCVQGPRPLLAVERTGQRPLWAPSLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTF
YLRESGWYWGSITASEARQHLQKMPEGTF LVRDSTHPSYLF T LSVKTTRGPTNVRIEYADSSFR L DSNCLSRP
LAFPDVVS L VQHYVASCTADTRSDSPDPAPT PALPMPKEDAPSDPALPAPPPATAVHLKL VQPFVRRSSARSLQ
LCRLVINRLVADVDCLPLPRRMADYLRQYPFQL

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FIGURE 1114

GXCCCTCGACGGCXTGCAGCCGGGAGAGCC**ATG**CGGGGGGCCGCAGCGGGCGGCAGAGGCGGAGGTGCCTGGGGG
CCGGGGCGCGGAGGGGCCGGGGGGCTCCGGCGGGGGCTGCTCTCCCCAGCCCCCGCGGCTCCCCCGGGGTGGG
CTGCAGCCGCTCAGGGCCACGATCCCCTTCCAGCTGCAGCAGCCGCACCAGCGCCGGGACGGGGGTGGCCGTGCA
GCCAGCGTCCCATGCTCGGTGGCCCCAGAAAAGTCAGTGTGTAGGCCTCAGCCACTTCAGGTCCGGCGTACATT
TCCCTGGACACCATCCTCAGCTCCTACCTTCTGGGCCAGTGGCCACGAGATGCTGATGGGGCCTTCACCTGCTGC
ACCAATGACAAGGCCACCCAGACGCCCCCTGTCTGGCAAGAGCTAGAAGGTGAGCGTGCCAGTTCCTGTGCACAC
AAGCGCTCAGCATCCTGGGGCAGCACAGACCACCGAAAAGAGATTTCCAAGTTGAAGCAACAACCTGCAGAGGACG
AAGCTGAGCCGAGTGGGAAAGAGAAGGAGCGAGGTTACCACTCCTAGGGGACCACGCAGTGCGGGGAGCACTG
AGGGCGTCCCCTCCCAGCTTCCCCTCAGGGTCCCCTGTCTTGCGACTCAGCCCCTGCTGCACAGGAGCCTGGAA
GGGCTCAACCAAGAGCTGGAGGAGGTATTTGTGAAGGAGCAGGGAGAAGAGGAGCTGCTGAGGATCCTTGATATC
CCTGATGGGCACCGGGCCCCAGCTCCTCCCCAGAGTGGCAGCTGTGATCATCCCCCTCCTCCTCCTGGAGCCTGGC
AACCTTGCCAGCTCTCCTTCCATGTCTTGGCATCTCCCCAGCCTTGTGGCCTGGCCAGTCATGAGGAACATCGG
GGTGCCGCCGAGGAGCTGGCATCCACCCCAACGACAAAGCCTCCTCTCCAGGACACCCAGCCTTTCTTGAAGAT
GGCAGCCCATCTCCAGTCTTGCCTTTGCTGCCTCCCCCTCGACCTAATCATAGCTACATCTTCAAACGGGAGCCCC
CCAGAAGGCTGTGAGAAAGTGCCTGTGTTTGAAGAAGCCACGTCTCCAGGTCCTGACCTGGCCTTCTGACTTCC
TGTCTGACAAGAACAAGTCCATTTCAACCCGACTGGCTCAGCCTTCTGCCCCGTCAACCTGATGAAGCCCCCTC
TTCCCCGGCATGGGCTTCATCTTCCGTAACTGCCCCCTCAAACCCGGGATCTCCCCTTCCCCCGGCCAGCCCCAGG
CCACCACCTCGGAAGGATCCGGAAGCCTCCAAGGCCTCCCCACTGCCATTTCGAGCCATGGCAGCGCACCCACCA
TCAGAAGAGCCTGTGCTTTTCCAGAGCTCCCTGATGGTCT**CGA**GGGTCCCACCCCTGCCCCACTTTACCATAGAGA
CCAGTGCCTTGGTGGCAGGTCCCTCCCCAGGTCCCTGAGATGGGGTATGGAGGGGGCCCTTCCCTCTCGGCCTTC
GAGCACTTTCTTTCACTTACTGTGTCAAAGCCCTGGGTCTCTTTTTGATGGGCACCGGGCCCTCTGAACGTGAT
GGGACCTGCCTTCTCCACTAGTAGCTGGGCAGCTCACAATTCACACCTGTGTACCTGCCACATCCCTCACTTGGT
GGAAAACACCCAGAAGGTCTTGAGTCCCCCACCCTGGGTGTGAGTCCAAATGACTGTATAGGAGGCCCTTATTT
TTGTACAGAGCAAGCTGGCCATGAACGAAGGAGAGAAGACGCCACAGATTTCTTCCCTCTCCTCCAGGAGACC
ATAAGATAGATCCCCATCCTCTCAGCCCTATTCCCATGCCTCCCTCTCATTGGAGGAGCTGACCAAAGCAGCCC
TAACGGGGCCATAACACTTGACCAATTCAGCTGCTGGCAGAGGGAGGAAACAAGTGTTTTCCCAAGTGGCATTTC
ATCTCGCTTTCACCCTGACTAAAGATTGTCTTAAGTAGCAGCCAGCCCGCCAGCCCCAGGTGGGTAGTGGGGA
GGAGAGCTGGCATTCTCCAGGTGGCAAATGGCGACTCTATACCTCCGCCCGCCCCAGGGCTGGATGGATTAGA
AAAATCCCTATTTTTCTTGTATCGATGTAGAGACTCTATTTTCTCCCAAAGACACTATTTTTGCAGCTGTTTGAA
GTTTGTATATTTTCCGTACTGCAGAGCTTACACAAAATTGAAGAATGTTAATGTTTCGAGTTTTCTTATCTTGTGT
TTAGAGGTTGTTTTTTCAGATCTTGGTGTAAATAGACCAAATAAATAAATAAATATTTCCAGCAAAAAAAAAAAG
TCGAC

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FIGURE 1115

MAGAAAGGRGGGAWGPGRGGAGGLRRGCSPAPAGSPRAGLQPLRATIPFQLQQPHQRRDGGGRAASVPCSVAP
KSVCRPQPLQVRRTFSLDTILSSYLLGQWPRDADGAFTCCTNDKATQTPLSWQELEGERASSCAHKRSASWGSTD
HRKEISKLKQQLQRTKLSRSGKEKERGSPLLGDHAVRGALRASPPSFPSGSPVLRLSPCLHRSLEGLNQEELEEVF
VKEQGEEELLRLDIPDGHRAAPPQSGSCDHPLLLLEPGNLIASSPSMSLASPQPCGLASHEEHRGAAEELASTP
NDKASSPGHPAFLEDGSPSPVLAF AASPRPNHSYIFKREPPEGCEKVRVFEEATSPGPDLAFLTSCPDKNKVHFN
PTGSAFCPVNLMKPLFPGMGFI FRNCPSNPGSPLPPASPRPPPRKDPEASKASPLPFEPWQRTPPSEEPVLFQSS
LMV

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FIGURE 1116

GTCATGTTCTTCGCGCCCTGGTGTGGACACTGCCAGCGGCTGCAGCCGACTTGGAATGACCTGGGAGACAAATAC
AACAGC**ATG**GGAAGATGCCAAAGTCTATGTGGCTAAAGTGGACTGCACGGCCCACTCCGACGTGTGCTCCGCCAG
GGGGTGCAGGATACCCACCTTAAAGCTTTTCAAGCCAGGCCAAGAAGCTGTGAAGTACCAGGGTCCCTCGGGAC
TTCCAGACACTGGAAAAGTGGATGCTGCAGACACTGAACGAGGAGCCAGTGACACCAGAGCCGGAAGTGAACCG
CCCAGTGCCCCGAGCTCAAGCAAGGGCTGTATGAGCTCTCAGCAAGCAACTTTGAGCTGCACGTTGCACAAGGC
GACCACTTTATCAAGTTCTTCGCTCCGTGGTGTGGTCACTGCAAAGCCCTGGCTCCAACCTGGGAGCAGCTGGCT
CTGGGCCCTTGAACATTCCGAAACTGTCAAGATTGGCAAGGTTGATTGTACACAGCACTATGAACTCTGCTCCGGA
AACCAGGTTTCGTGGCTATCCCACTCTTCTCTGGTTCCGAGATGGGAAAAAGGTGGATCAGTACAAGGGAAAGCGG
GATTTGGAGTCACTGAGGGAGTACGTGGAGTCGCAGCTGCAGCGCACAGAGACTGGAGCGACGGAGACCGTCACG
CCCTCAGAGGCCCGGTGCTGGCAGCTGAGCCCGAGGCTGACAAGGGCACTGTGTTGGCACTCACTGAAAAATAAC
TTCGATGACACCATTGCAGAAGGAATAACCTTCATCAAGTTTTATGCTCCATGGTGTGGTCAATTGTAAGACTCTG
GCTCCTACTTGGGAGGAACTCTCTAAAAAGGAATTCCCTGGTCTGGCGGGGTCAAGATCGCCGAAGTAGACTGC
ACTGCTGAACGGAATATCTGCAGCAAGTATTCGGTACGAGGCTACCCACGTTATTGCTTTTCCGAGGAGGGGAA
AAAGTCAGTGAGCACAGTGGAGGCAGAGACCTTGACTCGTTACACCGCTTTGTCCTGAGCCAAGCGAAAAGACGAA
CTTT**AG**GAAACACAGTTGGAGGTACCTCTCTGCCAGCTCCCGCACCTGCGTTTAGGAGTTCACTCCACAGA
GGCCACTGGGTTCCCACTGGTGGCTGTTTCAGAAAAGCAGAACATACTAAGCGTGAGGTATCTTCTTTGTGTGTGTG
TTTTCCAAGCCAACACACTCTACAGATTCTTTATTAAATGTGTAACATCATGGTCACTGTGTAAACATTTTCAGTG
GCGATATATCCCTTTGACCTTCTCTTGATGAAATTTACATGGTTTCCTTTGAGACTAAAATAGCGTTGAGGGAA
ATGAAATTGCTGGACTATTTGTGGCTCCTGAGTTGAGTGATTTTGGTGAAAGAAAGCACATCCAAAGCATAGTTT
ACCTGCCCACGAGTTCTGGAAAGGTGGCCTTGTGGCAGTATTGACGTTCTCTGATCTTAAGGTCACAGTTGACT
CAATACTGTGTTGGTCCGTAGCATGGAGCAGATTGAAATGCAAAAACCCACACCTCTGGAAGATACCTTCACGGC
CGCTGCTGGAGCTTCTGTTGCTGTGAATACTTCTCTCAGTGTGAGAGGTTAGCCGTGATGAAAGCAGCGTTACTT
CTGACCGTGCTGAGTAAGAGAATGCTGATGCCATAACTTTATGTGTGATACTTGTCAAATCAGTTACTGTTCA
GGGGATCCTTCTGTTTCTCACGGGGTGAAACATGCTTTAGTTCCCTCATGTTAACACGAAGCCAGAGCCCACATG
AACTGTTGGATGTCTTCTTAGAAAGGGTAGGCATGGAAAATTCCACGAGGCTCATTCTCAGTATCTCATTAAC
CATTGAAAGATTCCAGTTGTATTTGTACCTGGGGTGACAAGACCAGACAGGCTTTCCAGGCCTGGGTATCCAG
GGAGGCTCTGCAGCCCTGCTGAAGGGCCCTAACTAGAGTTCTAGAGTTTCTGATTCTGTTTCTCAGTAGTCCTTT
TAGAGGCTTGCTATACTTGGTCTGCTTCAAGGAGGTCGACCTTCTAATGTATGAAGAATGGGATGCATTTGATCT
CAAGACCAAAGACAGATGTCAGTGGGCTGCTCTGGCCCTGGTGTGCACGGCTGTGGCAGCTGTTGATGCCAGTGT
CCTCTAACTCATGCTGTCTTGTGATTAAACACCTCTATCTCCCTTGGGAATAAGCACATACAGGCTTAAGCTCT
AAGATAGATAGGTGTTTGTCTTTTACCATCGAGCTACTTCCATAATAACCACTTTGCATCCAACACTCTTCAC
CCACCTCCCATACGCAAGGGGATGTGGATACTTGGCCCAAAGTAACTGGTGGTAGGAATCTTAGAAACAAGACCA
CTTATACTGTCTGTCTGAGGCAGAAGATAACAGCAGCATCTCGACCAGCCTCTGCCTTAAAGGAAATCTTTATTA
ATCACGTATGGTTCACAGATAATTCTTTTTTTAAAAAAACCCAACTCCTAGAGAAGCACAACTGTCAAGAGTCT
TGTAACACAACTTCAGCTTTGCATCACGAGTCTTGATTTCCAAGAAAATCAAAGTGGTACAATTTGTTTGTGTTA
CACTATGATACTTTCTAAATAAACTCTTTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAC

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FIGURE 1117

MEDAKVYVAKVDCTAHS DVCSAQGV RGYPTLKL FKPGEAVKYQGPRDFQTLENWMLQTLNEEPVTPEPEVEPPS
APELKQGLYELSASN FELHVAQGDHF IKFFAPWCGHCKALAPTWEQLALGLEHSETVKIGKVDCTQHYELCSGNQ
VRGYPTLLWFRD GKKVDQYKGKRDLES LREYVESQLQRTETGATETVTPSEAPVLAAEPEADKGTVLALTENNFD
DTIAEGITFIK FYAPWCGHCKTLAPTWEELSKKEFPGLAGVKIAEVDCTAERNICSKYSVRGYPTLLLFRGGKKV
SEHSGGRDLDSLHRFVLSQAKDEL

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FIGURE 1118

GCGGAGGGACCGACGGACGCACGGGCGGGCGGCCGGGAGCCATGGAGCGGGCCCTGGGGCCCCGGGGCGCGGGC
CGGGGTGGGCTTCCACGGGCACGACATGGAGACCTGTGGTTGCGAGGCTCCCTGGGGCTCGGCTTGGACCGCGAT
GGGGCTGGGCCCTGGCCTCCTAACGGGGCTGCTGTCTGGGGCGGTAGCTGGGGGGGCGCTCTCCCCCTGCCCGC
GACTCGGAGCACCCCCACCCCTCCCCTGCCGGGGCCAGGCCGGGCGGCGTTGTTGGCGGGGGCCCCGGTGGAGGCC
CGGCCTGGGGCGGCGCCCCGCCATGAATGGGCTGTCTGCTGAGTGAGCTCTGCTGCCCTCTTCTGCTGCCCGCCCTGCC
CCGGCCGCATCGCTGCCAAGCTCGCCTTCCTGCCGCCGGAGGCCACCTACTCCCTGGTGCCTGAGCCCCGAGCCGG
GGCCTGGTGGGGCCGGGGCCGCCCCCTTGGGGACCCCTGAGAGCCTCCTCGGGCGCACCCGGGCGCTGGAAGCTGC
ACCTGACGGAGCGTGCCGACTTCCAGTACAGCCAGCGCGAGCTGGACACCATCGAGGTCTTCCCCACCAAGAGCG
CCCGCGGCAACCGCGTCTCCTGCATGTATGTTTCGCTGCGTGCCCTGGTGCCAGACAAGGACACCAGGCTCAGGGAG
GCCATCCCCAGCTGGCATGGGTGGGCAGGCTGGGCGACTCCAACAACCCAGCGCCTGGTGGTTGCCTGCTGGGCG
AGAGCTGGGGCACAGGGGCTGCCCTGGCCTGCGGGTACATCCACCTTCTCGCCAGGTACACGGTCTCTTCTCGC
ACGGCAATGCCGTGGACCTGGGCCAGATGAGCAGCTTCTACATTGGCCTGGGCTCCCGCCTCCACTGCAACATCT
TCTCCTACGACTACTCCGGCTACGGTGCCAGCTCGGGCAGGCCTTCCGAGAGGAACCTCTATGCCGACATCGACG
CCGCCTGGCAGGCCCTGCGCACCAAGGTACGGCATCAGCCCGGACAGCATCATCCTGTACGGGCAGAGCATCGGCA
CGGTGCCCCACCGTGGACCTGGCCTCGCGCTACGAGTGTGCCGCGGTGGTGCTGCACTCGCCGCTCACCTCGGGCA
TGCGCGTCGCCTTCCCCGACACCAAGAAGACCTACTGCTTCGACGCCTTCCCTAACATCGAGAAGGTGTCCAAGA
TCACGTCTCCCGTGCTCATCATCCACGGCACGGAGGACGAGGTGATCGACTTCTCGCACGGGCTGGCGCTCTACG
AGCGCTGCCCCAAGGCGGTGGAGCCGCTGTGGGTGGAGGGCGCCGGGGCACAACGACATCGAGCTCTACAGCCAGT
ACCTGGAGCGCCTGCGTCGCTTCATCTCCAGGAGCTGCCCAGCCAGCGCGCCTAGCGGCGGGCCCCAACCGGCCG
GACCTCAGCAATAAGGCGGGCCCCCGACCTCACCCCGCGCCGGCCCCCACCAGGGGCTGCATGTGGACCCCCCG
GGCGGGCCAGGGGACCCCGCCCCGACCCAGGGGCTGTGGACGATGTACAGGCAACAGAGCTACGCACTCCTTTCC
TTTTGGAAGCAAGAAGAAAATACGTGAAAACGGAAATTAAAGATTAAAAATTTTAAAAAAAAAAAAAAAAA

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FIGURE 1119

MNGLSLSELCCCLFCCPPCPGRIAAKLAFLPPEATYSLVPEPEPGPGGAGAAPLGTLRASSGAPGRWKLHLTERAD
FQYSQRELDTIEVFPTKSARGNRVSCMYVRCVPGARQGHQAQGHPQLAWVGRLGDSNNPAPGGCLLGESWGTGA
ALACGYIHLLARYTVLF SHGNAVDLGQMSSFYIGLGSRLHCNIFSYDYSYGASSGRPSEPNLYADIDAAWQALR
TRYGISPDSIILYGQSIGTVPTVDLASRYECAA VVLHSP L TSGMRVAFPDTKKTYCFDAFPNIEKVSKITSPVLI
IHGTEDEVIDFSHGLALYERCPKAVEPLWVEGAGHNDIELYSQYLERLRRFISQELPSQRA

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FIGURE 1120

GCGCGGCCCCATGAGTCTGGGGCTGCTGCGGCCGGCGCCGGTGAGCGAGGTCATCGTCTGCATTACAACCTACACC
GGCAAGCTCCGCGGTGCGCGCTACCAGCCGGGTGCCGGCCTGCGCGCCGACGCCGTGGTGTGCCTGGCGGTGTGC
GCCTTCATCGTGTAGAGAACTAGCCGTGTTGTTGGTGCTCGGACGCCACCCGCGCTTCCACGCTCCCATGTTT
CTGCTCCTGGGCAGCCTCACGTTGTGCGATCTGCTGGCAGGCGCCGCCCTACGCCGCCAACATCCTACTGTCTGGGG
CCGCTCACGCTGAAACTGTCCCCGCGCTCTGGTTCGCACGGGAGGGAGGCGTCTTCGTGGCACTCACTGCGTCC
GTGCTGAGCCTCCTGGCCATCGCGCTGGAGCGCAGCCTCACCATGGCGCGCAGGGGGGCCGCGCCCGTCTCCAGT
CGGGGGCGCACGCTGGCGATGGCAGCCGCGGCCCTGGGGCGTGTGCTGCTCCTCGGGCTCCTGCCAGCGCTGGGC
TGGAATTGCCCTGGGTGCGCTGGACGCTTGTCTCCACTGTCTTGCCGCTCTACGCCAAGGCCTACGTGCTCTTCTGC
GTGCTCGCCTTCGTGGGCATCCTGGCCGCGATCTGTGCACTCTACGCGCGCATCTACTGCCAGGTACGCGCCAAC
GCGCGGCGCCTGCCGGCACGGCCCGGGACTGCGGGGACCACCTCGACCCGGGCGCGTGCAGAGCCGCGCTCGCTG
GCCTTGCTGCGCACGCTCAGCGTGGTGTCTCTGGCCTTTGTGGCATGTTGGGGCCCCCTCTTCTGCTGCTGTTG
CTCGACGTGGCGTGCCCGGCGCGCACCTGTCTGTACTCCTGCAGGCCGATCCCTTCTGGGACTGGCCATGGCC
AACTCACTTCTGAACCCCATCATCTACACGCTACCAACCGCGACCTGCGCCACGCGCTCCTGCGCCTGGTCTGC
TGCGGACGCCACTCCTGCGGCAGAGACCCGAGTGGCTCCAGCAGTCGGCGAGCGCGGCTGAGGCTTCCGGGGGC
CTGCGCCGCTGCCTGCCCCGGGCCTTGATGGGAGCTTCAGCGGCTCGGAGCGCTCATGCCCCAGCGCGACGGG
CTGGACACCAGCGGCTCCACAGGCAGCCCCGGTGCACCCACAGCCGCCCGGACTCTGGTATCAGAACCGGCTGCA
GACTGACACCCTCGGCCCACGACTGTCTTCCCAAGTTTACAGACTTGTCTTTTTACATAAAGGAATTTGTAGG
AAATGCAGCCAAAGGTGCAGTCGGAAGATGCAGGGGAAATGTATTTATGCAGCGACACCCACAATGTGAACA
AACAGACAAAAATCTGTGCCCTCGTGGAATTGACGTTCTGCTTGGGAACACAGAAAAGAACTCGGTGATGAAAT
AATGGAGATGATTCCAGTGACAAACGACAGAGATGGTGATGGTGGTCAGGGAAGACCTCTCTGCAGAGGTAGTGA
CTTGATGATGTGAGCTGAGACCTCTGTCTGGGAAGACCAAAAGAAAAGCATTTAGGATGAGGGAATGGCATGCG
CAAAGGCCCTGAGGCTGAAATGTGCCCATGTGTTCTAAGAAATGCAGCGATGCTGGTGTGCCTGGAGCAGGGACG
GAGGGGGAGAATGGGAGGAGACAAGGAGCTGAAGGAGTAGTTCGGAAGGACCTTGTGGGTGATATAGAGGACTT
CGCTTTTGCTCTGAGTGAGGTGGGAGCCATAGAAGCTTCTAAGCAGAAGAGGGACTTGCCCTAATTCAGGTGATC
ACAGGTGTCTTGTGGCCTCCATGGGAGGTTGAAAACACAGAAGGTGAAGGGGGGCTGCACTGAGCCACAGGAAC
AATGATGGAGATTCCAGCTAAGCCCAGACCCCGTGGATTCTAGATAGATTTTAGAGGCAGCAGACAGAATTACTG
AGGAATTGAGTGTAAGAGTGGAATAAAGTTATCAAGGACAAATGCCAAGGGTGGGGCACCCCAAATTTGACTTTG
GGAGACTCAGCCAAATCCTATCTGGTAATAAAATTTCTTTTTTATTTTTCTTTTCTTTCTTTCTTTCTTTCTTT
TTTTTTTTTTTTTGGATTGGGATCTTGTGCTCTGTCAACCAGGCTGGAGTGCAATGGGCACAATTATAGCTCACT
GCAGCCTGGAACCTCCTGGGATCAAGCCTGGAGTTCTGCTTCAGCCTCCCTAGTAGCTGGGACTACAGGCATGCA
CCACCATGCCAGTTAATAAAATTTCTTCAAATGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1121

MESGLLRPAPVSEVIVLHNYTGKLRGARYQPGAGLRADAVVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLL
GSLTSLDLLAGAAYAANILLSGPLTLKLSPALWFAREGGVFVALTASVLSLLAIALERSLTMARRGPAPVSSRGR
TLAMAAAAGVSLLLGLLPALGWNCLGRLDACSTVLPLYAKAYVLFVLAFAVGILAAICALYARIYCQVRANARR
LPARPGTAGTTSTRARRKPRSLALLRTL SVVLLAFVACWGPLFLLLLLDVACPARTCPVLLQADPFLGLAMANSI
LNPIIYTLTNRDLRHALLRLVCCGRHSCGRDPSGSQQSASAAEASGGLRRCLPPGLDGSFSGSERSSPQRDGLDT
SGSTGSPGAPTAARTLVSEPAAD

1234/1629
FIGURE 1122A

GGGGGCAGAAAAGGGGGCGGCGGACTCGGCTTGTTGTGTTGCTGCCTGAGTGCCGGAGACGGTCCTGCTGCTGCC
GCAGTCCTGCCAGCTGTCCGACGATGTCGTCCCACCTAGTCGAGCCGCCGCCGCCCTGCACAACAATAACAACA
ACTGCGAGGAAAAATGAGCAGTCTCTGCCCCCGCCGGCCGGCCTCAACAGTTCCTGGGTGGAGCTACCCATGAACA
GCAGCAATGGCAATGATAATGGCAATGGGAAAAATGGGGGGCTGGAACACGTACCATCCTCATCCTCCATCCACA
ATGGAGACATGGAGAAGATTCTTTTGGATGCACAACATGAATCAGGACAGAGTAGTTCAGAGGCAGTTCTCACT
GTGACAGCCCTTCGCCACAAGAAGATGGGCAGATCATGTTTGATGTGGAAATGCACACCAGCAGGGACCATAGCT
CTCAGTCAGAAGAAGAAGTTGTAGAAGGAGAGAAGGAAGTCGAGGCTTTGAAGAAAAGTGGGACTGGGTATCAG
ACTGGTCCAGTAGACCCGAAAACATTCCACCCAAGGAGTTCCACTTCAGACACCCTAAACGTTCTGTGTCTTTAA
GCATGAGGAAAAGTGGAGCCATGAAGAAAGGGGGTATTTTCTCCGCAGAATTTCTGAAGGTGTTCAATCCATCTC
TCTTCCTTTCTCATGTTTGGCTTTGGGGCTAGGCATCTATATTGAAAGCGACTGAGCACACCCTCTGCCAGCA
CCTACTGAGGGGAAAGGAAAAGCCCTGGAAATGCGTGTGACCTGTGAAGTGGTGTATTGTACAGTAGCTTATTT
GAACTTGAGACCATTGTAAGCATGACCCAACCTACCACCCTGTTTTTACATATCCAATTCCAGTAACTCTCAAT
TCAATATTTTATTCAAACCTGTGTGAGGCATTTTACTAACCTTATACCCTTTTTGGCCTGAAGACATTTTAGAAT
TTCCTAACAGAGTTTACTGTTGTTTAGAAATTTGCAAGGGCTTCTTTTCCGCAATGCCACCAGCAGATTATAAT
TTTGTGAGCAATGCTATTATCTCTAATTAGTGCCACCAGACTAGACCTGTATCATTTCATGGTATAAATTTTACTC
TTGCAACATAACTACCATCTCTCTCTTAAACGAGATCAGGTTAGCAAAATGATGTAAAAGAAGCTTTATTGTCTA
GTTGTTTTTTTTTCCCCAAGACAAAGGCAAGTTTCCCTAAGTTTGAGTTGATAGTTATTAAAAAGAAAACAAAAC
AAAAAAAAAAGGCAAGGCACAACAAAAAATATCCTGGGCAATAAAAAAATATTTTAAACCAGCTTTGGAGCCA
CTTTTTTGTCTAAGCCTCCTAATAGCGTCTTTTAAATTTATAGGAGGCAAACTGTATAAATGATAGGTATGAAATA
GAATAAGAAGTAAAATACATCAGCAGATTTTCTACTAGTATGTTGTAATGCTGTCTTTTCTATGGTGTAGAATC
TTTCTTTCTGATAAGGAACGTCTCAGGCTTAGAAATATATGAAATTGCTTTTTGAGATTTTTTGCCTGTGTGTTG
ATATTTTTTACGATAATTAGCTGCATGTGAATTTTTTCATGACCTTCTTTACATTTTTTATTTTTTATTTCTTTAT
TTTTTTTTTCTCTAAGAAGAGGCTTTGGAATGAGTTCCAATTTGTGATGTTAATACAGGCTTCTGTTTTTAGGAAG
CATCACCTATACTCTGAAGCCTTTAACTCTGAAGAGAATTGTTTCAGAGTTATTCCAAGCACTTGTGCAACTTG
GAAAAACAGACTTGGGTGTGGGAACAGTTGACAGCGTTCTGAAAAGATGCCATTTGTTTCCTTCTGATCTCTCA
CTGAATAATGTTTACTGTACAGTCTTCCCAAGGTGATTCTGCGACTGCAGGCACTGGTCAATTTCTCATGTAGC
TGCTTTTTCAGTTATGGTAACTCTTAAAGTTTCAAGCACTCAACAGATTCTTCAGTGATATACTTGTTCGTTT
ATTTCTAAAATGTGAAGCTTTAGGACCAAAATTGTTAGAAAGCATCAGGATGACCAGTTATCTCGAGTAGATTTT
TTGATTTTCAAGACATCTAGCATGACTCTGAAGGATACCATGTTTATATATAAATAATTACTGTTTATGATA
TAGACATTGATATTGACTATTTAGAGAACCCTTGTTAATTTTAAACTAGCAATCTATAAAGTGCACCAGGTCAA
CTTGAATAAAACACTATGACAGACAGGTTTGCCAGTTTGCAGAACTAACTCTTTTCTCACATCAACATTTGTA
AAATTGATGTGTTATAGTGGAATAAATATAGATTAAACAAAATTTTATCTTTTTTCAAGAATATAGCTGGC
TATCTTTAAGAAAGATGATATATCCTAGTTTTGAAAGTAAATTTCTTTTTTCTTTCTAGCATTTGATGTCTAAAT
AATTTGGACATCTTTTCTTAGACCATGTTTCTGTCTTACTCTTAAACCTGGTAACACTTGATTGCTTCTAT
AACCTATTTATTTCAAGTGTTTCAATTTGAATTTCTTTGGGAAGAAAGTAAATCTGATGGCTCACTGATTTTGA
AAAGCCTGAATAAAATTGGAAGACTGGAAGTTAGGAGAACTGACTAGCTAACTGCTACAGTATGCAATTTCT
ATTACAATTGGTATTACAGGGGGGAAAAGTAAAATTACACTTTACCTGAAAGTGACTTCTTACAGCTAGTGCATT
GTGCTCTTTCCAAGTTTCAAGCAGTCTTATCAGTGGTGCCACTGAACTGGGTATATTTATGATTTCTTTTCAAG
GTTAAAAAGAAAACATAGTGTGCCCCTTTTTCTTAAAGCATCAGTGAAATTATGGAAAATTACTTAAACCGTGAAT
ACATCATCACAGTAGAATTTATTATGAGAGCATGTAGTATGTATCTGTAGCCCTAACACATGGGATGAACGTTTT
ACTGCTACACCCAGATTTGTGTTGAACGAAAACATTGTGGTTTGGAAAGGAGAATTCACAATTAATAGTTGAAA
TTGTGAGGTTAATGTTTTAAAAGCTTTACACCTGTTTACAATTTGGGGACAAAAGGCAGGCTTCATTTTTTATA
TGTTTGATGAAAACCTGGCTCAAGATGTTTGTAAATAGAATCAAGAGCAAACTGCACAACTTGACATTGGA
GTGCAACAAGTTCCCGTGATTGCAGTAAAAATATTTACTATTCTAAAAAATGAGAATTGAAGACTTAGCCAGTC
AGATAAGTTTTTTCATGAACCCGTTGTGGAATTTATTGGAATTAAGTGAAGTGAATTATGCATTCTTCATC
TATTTTAGTTAGCACTTTGTATCGTTATATACAGTTTACAATACATGTATAACTGTAGCTATAAACATTTTGTG
CCATTAAGCTCTCACAAAACCTTTTCTGTGAGTATATCATTTTTCTGTGCGACCTGTTGCCTGGGAGTTTCAAG
CGATGAGGCTCCTCGCCTACACACAGCCTTCCAGTCATCTGGCTTCCCCAGCAGTGGAGTTCTAACAGTGCTC

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FIGURE 1122B

AGGGTGTGAACGGTGTTCCTGTGGGGACAGTCACCGCAGTGTGAGCATTCGTGAGTGCCTCGGGACTGTGGCATT
AGAGCATTTGCCTCCAGGTAGTGGCAGGAGGGCGCTCACGGGAGGAGTGCTCAGGAAGTACAGGAGAGAAGAAGA
GTGTGCCCTGATGGAAATGACAGTGGGACACCAAGTGAAGTGGATCCAGAAGGAAGTGAAGTTCACGTGCCTG
GAAACAGGATGGATACAGAGGAACTGAAAAATGTAGGTTAGTACTGAACCTAATTGAAATGTGTGTGCCCTCC
CAGGGGTACACTTCATCATATAGTTAGCTGGGTTTACTTCTTTTAAACCAGGAGGTGATTTAAGATGTAAATTT
TAGACAGTCAAGCCATCTGGTGAGAGAGTACCAGAGGAGATCAATCAGTTCTCTAGGCGAGGAGCTAGGGCCTGT
CCTGGGCTGTCAACCTGAGGTTGGCAGTGGTGGGCCAGGATACGTATGAGAAACAAAGCGGAAGTAACTGGTCA
GAAAGTGACTTAGAGACGAAGGCGTGTGTATTCTTTGTGTGTGTGGCCCGTAAACATGGGTTGATCCCATTAG
TTAAAGGAGGACAGGAGAAGAAATGGGGTGGTAGGAGCAAAGAGGGAGGATTTTCAGTTTTGAGTGCCTTGAACAT
GAAATGTCTGAGGGCCTTCTGATTGGACACTTACTCC

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FIGURE 1123

GQKRGRRLVLLPECRRRSCCRSPASCPTMSSHLVEPPPPLHNNNNNCEENEQSLPPPAGLNSSWVELPMNS
SNGNDNGNGKNGGLEHVPSSSSIHNQDMEKILLDAQHESGQSSSRGSSSHCDSPSPQEDGQIMFDVEMHTSRDHSS
QSEEEVVEGEKEVEALKKSADWVSDWSSRPENIPPKEFHFRHPKRSVLSMRKSGAMKKGGIFSAEFLKVFIPSL
FLSHVLALGLGIYIGKRLSTPSASTY

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FIGURE 1124

GCGGCGGACTCGGCTTGTTGTGTTGCTGCCTGAGTGCCGGAGACGGTCCTGCTGCTGCCGAGTCCTGCCAGCTG
TCCGACGATGTCGTCCCACCTAGTCGAGCCGCCGCCGCCCTGCACAACAACAACAACACTGCGAGGAAAAATGA
GCAGTCTCTGCCCCCGCCGGCCGGCCTCAACAGTTCTTGGGTGGAGCTACCCATGAACAGCAGCAATGGCAATGA
TAATGGCAATGGGAAAAATGGGGGGCTGGAACACGTACCATCCTCATCCTCCATCCACAATGGAGACATGGAGAA
GATTCTTTTGGATGCACAACATGAATCAGGACAGAGTAGTTCCAGAGGCAGTTCTCACTGTGACAGCCCTTCGCC
ACAAGAAGATGGGCAGATCATGTTTGATGTGGAAATGCACACCAGCAGGGACCATAGCTCTCAGTCAGAAGAAGA
AGTTGTAGAAGGAGAGAAGGAAGTCGAGGCTTTGAAGAAAAGTGC GGACTGGGTATCAGACTGGTCCAGTAGACC
CGAAAACATTCCACCCAAGGAGTTCCACTTCAGACACCCCTAAACGTTCTGTGTCTTTAAGCATGAGGAAAAGTGG
AGCCATGAAGAAAGGGGGTATTTTCTCCGCAGAAATTTCTGAAGGTGTTTCAATCCATCTCTCTTCTCTTCTCATGT
TTTGGCTTTGGGGCTAGGCATCTATATTGGAAAGCGACTGAGCACACCCTCTGCCAGCACCTACTAGGGGAAAGG
AAAAGCCCCTGGAAATGCGTGTGACCTGTGAAGTGGTGTATTGTACAGTAGCTTATTTGAACCTGAGACCATTG
TAAGCATGACCCAACCTACCACCCTGTTTTTACATATCCAATTCCAGTAACCCTCAAATTCATATTTTATTCAA
ACTCTGTTGAGGCATTTTACTAACCTTATACCCTTTTGGCCTGAAGACATTTTAGAATTTCTTAACAGAGTTTA
CTGTTGTTTAGAAATTTGCAAGGGCTTCTTTCCGCAAATGCCACCAGCAGATTATAATTTGTGCGCAATGCTA
TTATCTCTAATTAGTGCCACCAGACTAGACCTGTATCATTCATGGTATAAATTTTACTCTTCCAACATAACTACC
ATCTCTCTCTTAAACGAGATCAGGTTAGCAAAATGATGTAAAAGAAGCTTTATTGTCTAGTTGTTTTTTTTCCCC
CAAGACAAAGGCAAGTTTCCCTAAGTTTGAGTTGATAGTTATTAAAAAGAAAACAAAACAAAAAAAAGGCAAG
GCACAACAAAAAATATCCTGGGCAATAAAAAAATATTTTAAACCAAAAAAAAAAAAAA

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FIGURE 1125

MSSHLVEPPPPLHNNNNNCEENEQSLPPPAGLNSSWVELPMNSSNGNDNGNGKNGGLEHVPSSSSSIHNGDMEKIL
LDAQHESGQSSSRGSSHCDSPSPQEDGQIMFDVEMHTSRDHSSQSEEEVVEGEKEVEALKKSADWVSDWSSRPEN
IPPKEFHFRHPKRSVLSMRKSGAMKKGGIFSAEFLKVFIPSLFLSHVLALGLGIYIGKRLSTPSASTY

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FIGURE 1126

GCGGCCGGCGGCGTCTCCTCCCGGGACGCTGAGGGGCCCCGAGGAGACCGTGAGGCTCTGGCCTGCAGCTCGCGCC
GCCATGGACGCTGCCGAGGTCTGAATTCCTCGCCGAGAAGGAGCTGGTTACCATTATCCCCAACTTCAGTCTGGAC
AAGATCTACCTCATCGGGGGGGACCTGGGGCCTTTTAAACCTGGTTTACCCGTGGAAGTGCCCTGTGGCTGGCG
ATTAACCTGAAACAAAGACAGAAATGTCGCCTGCTCCCTCCAGAGTGGATGGATGTAGAAAAGTTGGAGAAGATG
AGGGATCATGAACGAAAGGAAGAAACTTTTACCCCAATGCCCAGCCCTTACTACATGGAACCTACGAAGCTCCTG
TTAAATCATGCTTCAGACAACATCCCGAAGGCAGACGAAATCCGGACCCCTGGTCAAGGATATGTGGGACACTCGT
ATAGCCAACTCCGAGTGTCTGCTGACAGCTTTGTGAGACAGCAGGAGGCACATGCCAAGCTGGATAACTTGACC
TTGATGGAGATCAACACCAGCGGGACTTTCTCACACAAGCGCTCAACCACATGTACAACTCCGCACGAACCTC
CAGCCTCTGGAGAGTACTCAGTCTCAGGACTTCTTAGAGAAAAGGCCTGGTGCAGGCGGCTTGCTGGGGGATGTGAG
CGCTCAGGATGTGATGAGGTACTCGTGGTTCTGGAGCTCTAGAAACACTTCTGATGCATGAAAAATGTGTGATGG
TGCAAGGAATGGATTGAGGATGTTGTTGGAGAAACAAGTTTGTGATTAGTCCTTAAACTTAGCTCCCTGGGACA
TTCTTCAATTCCACATCTGTTTCTAGAAACCAGCCCTTTTCCCCCACTTTTGAGAAATAAAAAAGCCTTAGGT
AAATAAGTCATTCTCCCTAGCAGAGCCACTTGGGTCTCCTGCATGGAAGCCGTCACACTTGGGCAGGTGTTTCACT
GACTGGTAGGTGTAGATACAGCAGGAGTGGCCATGTGGTCCACGGCTTTTACCCCTTCTTGATCCTGATTTCTT
GGGCTGAATTTAGACTCTCTCACAGAGGTGGCTCACAGAGAAGGATGGCAGATGGTGCAGCCAACAATGCTGACC
GGTGCTTATCCTCTAAGCCCTGATCCACAATAAAAAATGGACCCAACTCAAAAAAAAAA

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FIGURE 1127

MDAAEVEFLAEKELVTIIPNFSLDKIYLIIGGDLGPFNPGLPVEVPLWLAINLKQRQKCRLLPPEWMDVEKLEKMR
DHERKEETFTPMPSPYYMELTKLLLNHASDNIPKADEIRTLVKDMWDTRIAKLRVSADSFVRQQEAHAKLDNLTL
MEINTSGTFLTQALNHMYKLRTNLQPLESTQSQDF

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FIGURE 1128

CTCGCCGAGATGACCTGGGCACCTCTGCGTTGAATCGGCAAATACTGATCAAGCCGCATTTATTCTGCTCTCAGG
AACTCTAAGTCTAGCAGAGAAGATGAGGCGGTAGAAGTTCATCAATGGCTTGGCTGGAGGACAAGCAAATTGAGG
ACATTGGCAACGGAGTGATCAAAATGATAGATCATGAGGCCTAAAATGAATAAGGAAAGAAGAGAAAGTGGCAGAG
GCTGAGAACAGAAAGAGAGGGGTGGAGGGGGCTGTAAATCTTGAAGATTAGGGTATAATATGAGTATATGGGTAAAG
ATTGGAAGAATTGTGTAGGAGGCAGTAGTCAAAAAGTAGAAGCAGTTTGGAAAGAGTAGTTACAAATATCAAGAGC
CAGGTGGCTAAAAGGTGGAGCTATAGGTCAATTGAAGCTCAAGAACTGAGTCTCTAGGGCATTGGTTAAGTCATC
TGTCTAGACTTCAAAGTTGTCTAGGATGATAATTCAGAAGACTGATCTGTGCCAAAGTCACAGGTTTTTCACGAC
TGAAAACAACATAGCAAAATAAGCCAAGATGCTCTGTGGATCCAATGACCTACGAGGCCAGTTCTTTGGCTTCAC
GCCACAAACGTGCATGCTTCGGATCTACATTGCATTTCAAGACTACCTATTTGAAGTGATGCAGGCCGTTGAACA
GGTTATTCTGAAGAAGCTGGATGGCATCCCAGACTGTGACATTAGCCCAGTGCAGATTTCGCAATGCACAGAGAA
GTTTCTTTGCTTCATGAAAGGACATTTTGATAACCTTTTTAGCAAATGGAGCAACTGTTTTTGACGTGATTTT
ACGTATTCCTCAAACATCTTGCTTCCTGAAGATAAATGTAAGGAGACACCTTATAGTGAGGAAGATTTTCAGCA
TCTCCAGAAAGAAATTGAACAGTTACAGGAGAAGTACAAGACTGAATTATGTACTAAGCAGGCCCTTCTTGACAG
ATTAGAAGAGCAAAAAATTGTTACAGGCCAACTCAAACAGACGTTGACTTTCTTTGATGAGCTTCATAATGTTGG
CAGAGATCATGGGACTAGTGATTTTAGGGAGAGTTTAGTATCCCTGGTTCAGAACTCCAGAAAACTACAGAACAT
TAGAGACAATGTGAAAAGGAATCGAAACGACTGAAAATATCTTAATTGCTCAGTAGTCAAAAGGAGGAGCCTGT
CAAAAAGTAGAATCATAAGGACTGTTCAAACCATAAGGACTGTTCAAATCATAACCAGTGACTGTTCAAACCAACC
ATACTTTTTATTAGATTTGCTTTGTCAACTCTTTCTGTATTCTGTGTTTTCTCTTTTTTGGTCCACTTTGCTG
AGGTATGAAGTGTACTACTTTGAACTAGGCTGAAGCATCTGAGTCTTCTAATAAGTGGGAAGGGATCCAACAAAG
AAGCCATGACCAGTTAAAGATATTTGCAGAGTTACACCTTGGTCATAAGTCCTTTGTGACCTTGATTATTTTGGC
TTACTCTTTGGATGAGACCAGACAAGAAAAGGATTAAACGGGTGGCTCCTTTAATATTATTATTATTGTTTTGA
GACAAGGTCCCTTTCTGTACCCAGGTTAGAGTAGATTTTCAAGTGGCACAATCTTGGCTCACTGCAACCTCTGTGT
CCTGGGCTCAAGTGATCCTCCTGCCTCAGCCTCCCAAGTAGCTAGGACCACAGGTGCGTGTACCATGCTTGGCT
AATTTTTTTGCAGAAACGAGGCCTCACTATATTGTCCAGGCTGAGTGGCTCTTTTATTAACCAGTCATTACACTG
CGGAACAGCCAACATAGAGTACTTGCTCTCGTCCTGTGAATTTTCTTTCATGAGGGAGTCAATATGTAGTGGA
GAAGCATGTAGCAAAAAAGACAACCTTGATCTTTAATAAAAAAGAAGTTGGTTTATTTCCAAAATAAATCCCCTG
ACAAAAAACCTGGTGATGTTAAGCAATTGACTGTCTTAGAGTCCAGCAGAAGACCTTAGACAAAAAAGCAGAAC
CCACTGGAGTAGAAAAGGAAGCATGTAGCATATACTCAGTAGTGAAATTTAATTTTACTGACTGTTAGGTATCTA
TGCCAATTTGTTTTTCACTTTCAGTTGGTTTTTGAATCTGCCTTATACCTAATATTTATTTATTCACACTCATAA
GCATCAAATATTTAATGCCCTCAGTGGGAAATTTGTGTTTAACTCAATGGAATCTAATATTTCTTTATGTCGTT
AGTCCCTGTAAAATGTTAGGTCACCCAAGGAAAGGGGAGAAATAGCAATGGTTGTTTCTAAGGTATTGCTTGCCC
TCCATGTCTTCTTAAAGAGCAGAACTTGAGGTTTCTCCTTTATGTAGAGAAGAAGTAACCTTAGGGTGTATTGCA
ATGAAATATTCATAGATATTGAAAGCTTGTGTTTACATGAAATATGTTTATTATCAAGAAGTCCTTTTTCCAATT
CTGTACATTAAATATATGTGTTTTAAAAA

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FIGURE 1129

MSVDPMTYEAQFFGFTPQTCMLRIYIAFQDYLFQVEMQAVEQVILKKLDGIPDCDISPVQIRKCTEKFLCFMKGHF
DNLFQKMEQLFLQLILRIPSNILLPEDKCKETPYSEEDFQHLQKEIEQLQEKYKTELCTKQALLAELEEQKIVQA
KLKQTLTFFDELHNVGRDHGTSDFRSLVSLVQNSRKLQNIRDNVEKESKRLKIS

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FIGURE 1130

GTGGGACTGGGATCATCAGTCTCTTCTGTGCACACTATGCGCGGCCTAGAGCGGTGTACGCGGTGGAGGCCAGTG
AGATGGCACAGCACACGGGGCAGCTGGTCCTGCAGAACGGCTTTGCTGACATCATCACCGTGTACCAGCAGAAGG
TGGAGGATGTGGTGTCTGCCCCGAGAAGGTGGACGTGCTGGTGTCTGAGTGGATGGGGACCTGCCTGCTGTTTGAGT
TCATGATCGAGTCCATCCTGTATGCCCCGGGATGCCTGGCTGAAGGAGGACGGGGTCATTTGGCCCCACCATGGCTG
CGTTGCACCTTTGTGCCCTGCAGTGTCTGATAAGGATTATCGTAGCAAGGTGCTCTTCTGGGACAACGCGTACGAGT
TCAACCTCAGCGCTCTGAAGTAAGTGTCCACAGCTGGGACTGGCACCCTCTTGTGGGGCCTCCTGGTCCACAGTC
TGCAGGTGGGCCAAGGCCCTGGGAGATCCCATACGACGGTTGGATAAATGAGGGTACCTGTGCACCCAGATAGGA
CAATCTGTTGTAGCATTGGAGTAATTAAAGCAGTATGGTGTCTATAACAAGACAGATGGGCAGAGCAGGGTAGAAT
GCAAGGAACAAAAATTTTCGTATGTGAAAAAGGTGGCATTACGATTAGGAGGGAGTGAGGGCCAAGTCAGCAAAT
TATTCTGGAGCAGTTGATTAGCCCTTGTCTCTCACGCCATACGTGAAAACCTTAATTCTGCATGGAATCAGCGTC
AGCGACAGACATCCATGGGGGCCTGTGTGCACCATCTTAGGTGGAGAAATGAGCAGCAACAATGGATGGAATGGA
CCCTGGGCTAGATAGAATCTGGCAGTCTATGTGGCAGAAATCAGCAAAAACACGATTGTAAAAGCAAACAAGTAA
TTAGAGAAATCACGTGCTGTGAGGTCTTGGAATCAATTAGAAAGAGATGACTAGCCAGATGGAATTGCAGCCCCAA
TCATGTGAACAGGCAAACCGCAAAAAATAAATAAAATTACCAATAAATACATGAAAAATTATAATGTTGTTAGTA
GTTAAATGCGAATTAAAATACATGCTGTTTTCCCTACCAGACAAGCAAAGAGTAAATTAAAATAGTAGCCCAGG
CTTGCCCTGGCAGTGGCAGGGAGGTGTGGCTGCCAGGGCCTTAGAGGTTGGCATCAGGCTGCCACCCCAGTCACT
GCCAGAGCCTCCCACCTGAGTGTTCCCTCCCGGCCTGGAAGCCAGTGGCCGTCCAGAGGAACGTGATTGAATTGC
TGTATATCCATCTGGTGGAGCACTGCTGTGTGTCTGTTAAAAAAGAAACCATAGGTTTTTAGGGATATGTAATGA
TATTTAGAAAGGGTTTAAAGAGACAGTAAAGCTTGGCAGAATAAACCGTGTATACAGAATGGATGTTTGCTTGCAT
AAATAAATTTATATAAATATGTCTGGGGGATAAAAAATAAGTATATCACAATGCTAAGACAGGCATATGGGGAATT
TAAGCTTTTCTTTATACTTGTCCATAGTTTCCAATTTTTAAATTTGTAATTTTTTATCAGAAAAATAAATGTGTA
AATATAGTGAATCTTTATTAAAAACATTCACTTTTATTGTCTAAAAAATAAAAAAAAAA

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FIGURE 1131

GGCACGAGGATTTCTCATCGTCAAGCTTTGTTCTCGTGGGGGGCTAGAAATCTCTTTCCAGTTCCAGATTGTGA
AGGGTTCCTGAGTAAGCAGCGTGTCTCCATCCCCCTCTCTAGGGGCTCTTGGATGGACCTTGCACTCTAGAAGGG
ACAATGGACTTCTGGCTTTGGCCACTTTACTTCCTGCCAGTATCGGGGGCCCTGAGGATCCTCCCAGAAGTAAAG
GTAGAGGGGGAGCTGGGCGGATCAGTTACCATCAAGTGCCCACTTCCTGAAATGCATGTGAGGATATATCTGTGC
CGGGAGATGGCTGGATCTGGAACATGTGGTACCGTGGTATCCACCACCAACTTCATCAAGGCAGAATACAAGGGC
CGAGTTACTCTGAAGCAATACCCACGCAAGAATCTGTTCTAGTGGAGGTAACACAGCTGACAGAAAGTGACAGC
GGAGTCTATGCCTGCGGAGCGGGCATGAACACAGACCGGGGAAAGACCCAGAAAGTCACCCTGAATGTCCACAGT
GAATACGAGCCATCATGGGAAGAGCAGCCAATGCCTGAGACTCCAAAATGGTTTTCATCTGCCCTATTTGTTCCAG
ATGCCTGCATATGCCAGTTCTTCCAAATTCGTAACCAGAGTTACCACACCAGCTCAAAGGGGCAAGGTCCCTCCA
GTTCCACACTCCTCCCCACCACCCAAATCACCCACCGCCCTCGAGTGTCCAGAGCATCTTCAGTAGCAGGTGAC
AAGCCCCGAACCTTCTGCCATCCACTACAGCCTCAAAAATCTCAGCTCTGGAGGGGCTGCTCAAGCCCCAGACG
CCCAGCTACAACCACCACACCAGGCTGCACAGGCAGAGAGCACTGGACTATGGCTCACAGTCTGGGAGGGAAGGC
CAAGGATTTACATCCTGATCCCGACCATCCTGGGCTTTTCTGCTGGCACTTCTGGGGCTGGTGGTGAAGG
GCCGTTGAAAGGAGGAAAGCCCTCTCCAGGCGGGCCCGCCGACTGGCCGTGAGGATGCGCGCCCTGGAGAGCTCC
CAGAGGCCCCGCGGGTTCGCCGCGACCGCGCTCCCAAAACAACATCTACAGCGCCTGCCCGCGGCGCGCTCGTGGA
GCGGACGCTGCAGGCACAGGGGAGGCCCCGTTCCCGGCCCGGAGCGCCGTTGCCCCCGCCCCGCTGCAGGTG
TCTGAATCTCCCTGGCTCCATGCCCCATCTCTGAAGACCAGCTGTGAATACGTGAGCCTCTACCACCAGCCTGCC
GCCATGATGGAGGACAGTGATTGAGATGACTACATCAATGTTCTGCTGCTGACAACCTCCCCAGCTATCCCCCAACC
CCAGGCTCGGACTGTGGTGCCAAGGAGTCTCATCTATCTGCTGATGTCCAATACCTGCTTCATGTGTTCTCAGAG
CCCTCATCACTTCCCATGCCCCATCTCGACTCCCATCCCCATCTATCTGTGCCCTGAGCATGGCTCTGCCCCAG
GTCGTCTTGACACCTTGGCAGCCCCCTGTAGTTGACAGGTAAGCTGTAGGCATGTAGAGCAATTGTCCCAATGC
CACTTGCTTCTCTTTCCAAGCCGTGGAACAGACTGTGGGATTTGCAGAGTGTCTTCTTCATGTCTTTGACCACAGG
GTTGTTGCTGCCAGGCTCTAGATCACATGGCATCAGGCTGGGGCAGAGGCATAGCTATTGTCTCGGGCATCCTT
CCCAGGGTTGGGTCTTACACAAATAGAAGGCTCTTGCTCTGAGTTATGTGACATGCCTCAGCCCCATGGACTAAG
CAGGGGTCTGGTATAAAAACACTCCTGGAAACGCCTTTGCCCTGATCCAAATGTTAGCACTTGCTAGTGAACGTC
TACTTATCTCAAGTTCTATGCTAAAGGCAATTTATCTTGATGTGATGATAAACCAAACTTATTAGCAAGATATGC
ATATATATCAAAAAAAAAAAAAAAAAA

1245/1629
FIGURE 1132

MDFWLWPLYFLPVSGALRILPEVKVEGELGGSVTIKCLPEMHVRIYLCREMAGSGTCGTVVSTTNFIKAEYKGR
VTLKQYPRKNLFLVEVTQLTESDSGVYACGAGMNTDRGKTQKVTLNVHSEYEPSWEEQPMPETPKWFHLPYLFQM
PAYASSSKFVTRVTTPAQRGKVPPVHHSSPTTQITHRPRVSRASSVAGDKPRTFLPSTTASKISALEGLLKQPQP
SYNHHTRLHRQRALDYGSQSGREGQGFHILIPTILGLFLLALLGLVVKRAVERRKALSRRARRLAVRMRALESSQ
RPRGSPRPRSQNNIYSACPRRARGADAAGTGEAPVPGPGAPLPPAPLQVSESPWLHAPSLKTSCEYVSLYHQPAA
MMEDSDSDDYINVPA

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FIGURE 1133

GGCACGAGGATTTCTCATCGTCAAGCTTTGTTCCCTCGTGGGGGCTAGAAATCTCTTTCCAGTTCCAGATTGTGA
AGGGTTCCCTGAGTAAGCAGCGTGTCTCCATCCCCCTCTCTAGGGGCTCTTGGATGGACCTTGCACTCTAGAAGGG
ACA**ATG**GACTTCTGGCTTTGGCCACTTTACTTCCTGCCAGTATCGGGGGCCCTGAGGATCCTCCCAGAAGTAAAG
GTAGAGGGGGAGCTGGGCGGATCAGTTACCATCAAGTGCCCACTTCCTGAAATGCATGTGAGGATATATCTGTGC
CGGGAGATGGCTGGATCTGGAACATGTGGTACCGTGGTATCCACCACCAACTTCATCAAGGCAGAATACAAGGGC
CGAGTTACTCTGAAGCAATACCCACGCAAGAATCTGTTCCCTAGTGGAGGTAACACAGCTGACAGAAAGTGACAGC
GGAGTCTATGCCTGCGGAGCGGGCATGAACACAGACCGGGGAAAGACCCAGAAAGTCACCCTGAATGTCCACAGT
GAATACGAGCCATCATGGGAAGAGCAGCCAATGCCTGAGACTCCAAAATGGTTTCATCTGCCCTATTTGTTCCAG
ATGCCTGCATATGCCAGTTCTTCCAAATTCGTAACCAGAGTTACCACACCAGCTCAAAGGGGCAAGGTCCCTCCA
GTTCCACCACTCCTCCCCACCACCCAAATCACCCACCGCCCTCGAGTGTCCAGAGCATCTTCAGTAGCAGGTGAC
AAGCCCCGAACCTTCTGCCATCCACTACAGCCTCAAAAATCTCAGCTCTGGAGGGGCTGCTCAAGCCCCAGACG
CCCAGCTACAACCACCACACCAGGCTGCACAGGCAGAGAGCACTGGACTATGGCTCACAGTCTGGGAGGGAAGGC
CAAGGATTTACATCCTGATCCCGACCATCCTGGGCCTTTTCTGCTGGCACTTCTGGGGCTGGTGGTGAAGAGG
GCCGTTGAAAGGAGGAAAGCCCTCTCCAGGCGGGCCCGCCGACTGGCCGTGAGGATGCGCGCCCTGGAGAGCTCC
CAGAGGCCCCGCGGGTCGCCGCGACCGCGCTCCCAAAACAACATCTACAGCGCCTGCCCGCGGCGCGCTCGTGGA
GCGGACGCTGCAGGCACAGGGGAGGCCCCGTTCCCGGCCCGGAGCGCGGTTGCCCGCGGCGCGCTCGTGGA
TCTGAATCTCCCTGGCTCCATGCCCCATCTCTGAAGACCAGCTGTGAATACGTGAGCCTCTACCACCAGCCTGCC
GCCATGATGGAGGACAGTGATTGAGATGACTACATCAATGTTCTGCTGCT**AGCA**CACTCCCCAGCTATCCCCCAACC
CCAGGCTCGGACTGTGGTGCCAAGGAGTCTCATCTATCTGCTGATGTCCAATACCTGCTTCATGTGTTCTCAGAG
CCCTCATCACTTCCCATGCCCCATCTCGACTCCCATCCCCATCTATCTGTGCCCTGAGCATGGCTCTGCCCCCAG
GTCGTCTTGACACCTTGGCAGCCCCCTGTAGTTGACAGGTAAGCTGTAGGCATGTAGAGCAATTGTCCCAATGC
CACTTGCTTCTCTTTCCAAGCCGTCGAACAGACTGTGGGATTTGCAGAGTGTTTCTTCCATGTCTTTGACCACAGG
GTTGTTGCTGCCCAGGCTCTAGATCACATGGCATCAGGCTGGGGCAGAGGCATAGCTATTGTCTCGGGCATCCTT
CCCAGGGTTGGGTCTTACACAAATAGAAGGCTCTTGCTCTGAGTTATGTGACATGCCTCAGCCCCATGGACTAAG
CAGGGGTCTGGTATAAAAAACACTCCTGGAAAACGCCTTTGCCCTGATCCAAATGTTAGCACTTGCTAGTGAACGTC
TACTTATCTCAAGTTCTATGCTAAAGGCAATTTATCTTGATGTGATGATAAACCAAACCTATTAGCAAGATATGC
ATATATATCAAAAAAAAAAAAAAAAAAAAA

1247/1629
FIGURE 1134

MDFWLWPLYFLPVSGALRILPEVKVEGELGGSVTIKCPLPEMHVRIYLCREMAGSGTCGTVVSTTNFIKAEYKGR
VTLKQYPRKNLFLVEVTQLTESDSGVYACGAGMNTDRGKTQKVTLNVHSEYEPSWEEQPMPEPKWFHLPYLFQM
PAYASSSKFVTRVTTPAQRGKVPPVHHSSPTTQITHRPRVSRASSVAGDKPRTFLPSTTASKISALEGLLKQPTP
SYNHHTRLHRQRALDYGSQSGREGQGFHILIPTILGLFLLALLGLVVKRAVERRKALSRRARRLAVRMRALESSQ
RPRGSPRPRSQNNIYSACPRRARGADAAGTGEAPVPGFAPLPPAPLQVSESPWLHAPSLKTSCEYVSLYHQPA
MMEDSDSDDYINVPA

1248/1629
FIGURE 1135

AGGGGCGGGCCCGGCGCGCGGGGAAGTCTCTGTAGGGCGGCCGGCTACCCTCAGCCGCCGCGCGT**CATG**CCCT
TTCGGTGCCCGGCTACTCACCGGGCTTCCGAAAAGCCGCCGAGGTAGTGCGGCTCCGACGGAAAAGGGCCCGGAG
CCGTGGAGCTGCCGCCTCCCCGCCCCGTGAGCTGACGGAGCCGGCGGCCCGCCGAGCCGCCCTGGTGGCGGGGCT
GCCTCTTCGCCCTTTCCCTGCTGCGGGGGGCGAGAGCGGTGGCAGCGGCGGCGGCCCGGCCGCTGCTCGGAGGAA
CCCCCTCGCCCCGCTGGACAACCGACCGCGGGTTCGCCGCGGAGCCCCCGACGGGCCGGCCCCGCGAGCAGCCGGA
GGCCCCGGTCCCGTTTTTAGATTCTAATCAAGAAAATGATTGCTATGGGAAGAGAAGTTTCCTGAAAGAACAAC
TGTTACTGAATTACCTCAGACTTCACATGTATCATTCTCCGAGCCTGATATTCCGTCCTCAAAAAGTACTGAGTT
ACCTGTGGACTGGAGTATTAAACGCGACTCCTTTTCACCTCTTCTCAACCCTTTACCTGGGCAGATCATTTGAA
AGCACAGGAAGAAGCTCAAGGTCTTGTCAGCATTGTAGGGCAACAGAAGTTACTTTGCCTAAAAGTATACAGGA
TCCCAAACCTCTCCTCTGAGCTCCGTTGTACCTTCCAGCAGAGCCTTATCTATTGGCTCCACCCTGCTTTGTCTTG
GCTACCACTGTTCCCTCGTATTGGAGCTGATAGAAAATGGCTGGAAAGACAAGTCCTTGGTCAAATGATGCAAC
CCTGCAGCATGTTTTAATGAGTGAAGTGGTCTGTGAGCTTTACTTCTCTATATAATTTGCTGAAGACAAAACCTTTG
CCCCTATTTCTACGTTTGTACCTATCAGTTTACTGTCTGTTCCGAGCAGCAGGATTAGCTGGAAGTGAAGTAAAT
CACAGCTCTCATATCTCCAACAACCTCGAGGTTTAAGAGAAGCTATGAGAAATGAAGGTATTGAATTTTCTCTGCC
TTTAATAAAAAGAAAGTGGCCATAAGAAGGAGACAGCATCTGGAACAAGCTTGGGATATGGGGAGGAGCAAGCCAT
CAGTGATGAGGATGAAGAGGAAAGTTTTTCTGGCTGGAAGAGATGGGTGTGCAAGATAAAATTAAGGAGCCAGA
CATACTTTCTATCAAGCTGCGTAAAGAGAAACATGAAGTACAAATGGATCACAGACCTGAATCTGTTGTGTTGGT
AAAAGGAATCAACACCTTTACATTGCTCAATTTTTTGATTAACTCTAAGAGTTTAGTTGCTACCTCAGGTCCACA
GGCAGGACTTCCCTCAACCCTCTTGTCCCCTGTTGCTTTCCGAGGTGCCACAATGCAAATGCTTAAGGCACGGAG
TGTGAATGTGAAGACACAAGCTCTTTCTGGATACAGAGACCAATTTAGTTTGGAGATTACAGGTCCATATGCC
TCATTCTCTGCATTCACTGACCATGCTGCTCAAACTCTCACAGAGTGGATCTTTCTCTGCAGTACTGTATCCACA
CGAGCCAACTGCTGTATTTAACATCTGCCTGCAAAATGGACAAAGTACTTGATATGGAGGTTGTTTATAAGGAGCT
TACTAACTGTGGTTTGCACCCTAACACTCTGGAGCAACTTAGTCAAATACCGTTACTTGGGAAATCATCTTTACG
GAATGTGGTGTGAGAGACTACATTTATAATTGGAGATCCT**TGA**ACACCAAAGTAAGCCTAAAAGGAATCTTTGAG
GAAAAAGCCTTCTAGCAAGGAAATTCAAGATTCTTGAAGTTGAAGGAATATACTGAAATGTTTATAAACATAAC
TTTTACTACAGTAGCATCTAAGGTTTTAAATGTGTTTTACTATTTTCAGATTAGATTTTATAGATATAAAGATGAA
AAACTCAGATAACTCAAATGAGATATCTATATCCCTACAACCTAATTGTATATTGAGCAGAACTGAATTAATAT
GCTTCCTTGCAAATGGGAAATCACATAGCAGTTACCCCATGGCATTGTGACTAATGGCATCAGGGCAAAATATG
TTACTTTACGATTACCTGTTAGCAGGTTCTTGTTCATAAAGGTAGAAAATAAATACAGACAACATCTAAAAAA
AAAAAAAAAAAAAA

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FIGURE 1136

MALSVPGYSPGFRKPPEVVRLRRKRARSRGAAASPPRELTEPAARRAALVAGLPLRPFPAAGGRGGGSGGGPAAA
RRNPFARLDNRPRVAAEPPDGPAREQPEAPVPFLDSNQENDLLWEEKFPERTTVTELPQTSHVSFSEPDIPSSKS
TELPVDWSIKTRLLFTSSQPFTWADHLKAQEEAQGLVQHCRATEVTLPKSIQDPKLSSELRCCTFQQSLIYWLHPA
LSWLPLFPRIGADRKMAGKTSPWSNDATLQHVLMDSWSVSFTSLYNLLKTKLCPYFYVCTYQFTVLFRAAGLAGS
DLITALISPTTRGLREAMRNEGIEFSLPLIKESGHKKETASGTS LGYGEEQAISDEDEEEESFSWLEEMGVQDKIK
KPDILSIKLRKEKHEVQMDHRPESVVLVKGINTFTLLNFLINSKSLVATSGPQAGLPPTLLSPVAFRGATMQMLK
ARSVNVKTQALSGYRDQFSLEITGPIMPHSLHSLTMLLKSSQSGSFSAVLYPHEPTAVFNICLQMDKVLDMEVVH
KELTNCGLHPNTLEQLSQIPLLKGSSLRNVVLRDYIYNWRS

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FIGURE 1137

CGGACGCGTGGGGAGAGGCTGTTTACCAGAACAGCATAACAAGGGCAGGTCTGACTGCAAGGCTGGGACTGGGAG
GCAGAGCCGCCGCCAAGGGGGCCTCGGTTAAACACTGGTCTGTTCAATCACCTGCAAGACGAAGGAGGCAAGGATG

CTGTTGGCCTGGGTACAAGCATTCTCGTCAGCAACATGCTCCTAGCAGAAGCCTATGGATCTGGAGGCTGTTTC
TGGGACAACGGCCACCTGTACCGGGAGGACCAGACCTCCCCCGCGCCGGGCTCCGCTGCCTCAACTGGCTGGAC
GCGCAGAGCGGGCTGGCCTCGGCCCCCGTGTGCGGGGGCCGGCAATCACAGTTACTGCCGAAACCCGGACGAGGAC
CCGCGCGGGCCCTGGTGCTACGTCACTGGCGAGGCCGGCGTCCCTGAGAAACGGCCTTGCGAGGACCTGCGCTGT
CCAGAGACCACCTCCCAGGCCCTGCCAGCCTTCACGACAGAAATCCAGGAAGCGTCTGAAGGGCCAGGTGCAGAT
GAGGTGCAGGTGTTTCGCTCCTGCCAACGCCCTGCCGCTCGGAGTGAGGCGGCAGCTGTGCAGCCAGTGATTGGG
ATCAGCCAGCGGGTGCAGATGAACCTCAAAGGAGAAAAAGGACCTGGGAACCTCTGGGCTACGTGCTGGGCATTACC
ATGATGGTGATCATCATTGCCATCGGAGCTGGCATCATCTTGGGCTACTCCTACAAGAGGGGGAAGGATTTGAAA
GAACAGCATGATCAGAAAGTATGTGAGAGGGAGATGCAGCGAATCACTCTGCCCTTGTCTGCCTTCACCAACCCC
ACCTGTGAGATTGTGGATGAGAAGACTGTCGTGGTCCACACCAGCCAGACTCCAGTTGACCTCAGGAGGGGCAGC
ACCCCCCTTATGGGCCAGGCCGGGACTCCTGGGGCCTGAGCCCCCCCCAGTGGGCAGGAGCCCATGCAGACACTGG
TGCAGGACAGCCCACCCTCCTACAGCTAGGAGGAACCTACCCTTTGTGTTCTGGTTAAACCCCTACCCTCCCCC
GCTTTTTTGGCGAATCCTAGTAAGAGTGACAGAAGCAGGTGGCCCTGTGGGCTGAGGGTAAGGCTGGGTAGGGTC
CTAACAGTGCTCCTTGTCCATCCCTTGGAGCAGATTTTGTCTGTGGATGGAGACAGTGGCAGCTCCACAGTGAT
GCTGCTGCTAAGGGCTTCCAAACATTGCCTGCACCCCTGGAACCTGAACCAGGGATAGACGGGGAGCTCCCCCAGG
CTCCTCTGTGCTTTACTAAGATGGCCTCAGTCTCCACTGTGGGCTTGAGTGGCATACTGTTATTTCATGGTTAA
GGTAAAGCAGGTCAAGGGATGGCATTGAAAAAATATATTTAGTTTTTAAATATTTGGGATGGAACTCCCTACTG
ACCTCTGAGAACTGGAAACGAGTTTGTACAGAAGTCAGAACTTTGGGTTGGGAATGAGATCTAGGTTGTGGCTGC
TGGTAIGCTTCAGCTTGCTGGCAATGATGTGCCTTGACAACCGTGGGCCAGGCCTGGGCCCAGGGACTCTTCCTG
TTTCATAAGGAAAGGAAGAATTGCACTGAGCATTCCACTTAGGAAGAGGATAGAGAAGGATCTGCTCCGCCTTTG
GCCACAGGAGCAGAGGCAGACCTGGGATGCCCCAGTTTCTCTTCAGGGATGGATAGTGACCTGTCTTCATTTTGC
ACAGGTAAGAGAGTAGTTAGCTAACCTATGGGAATTATACTGTGGGGCCTTGTGAGCTGCTTCTAAGAGGCTAAC
CTGGAAACTAAGCTCAGAGGCAAGGTAATAAAGCACTTCAGGGCTTGCTCCCCAAGTGGGCCTGATTTAGCAGGT
GGTCCTGCGGGCGTCCAGGTGAGCACCTTCCTGTAGGGCACTGGGGCTAGGGTCACAGCCCCCTAACTCATAAAGC
AATCAAAGAACCATTAGAAAGGGCTCATTAAGCCTTTTGGACACAGGACCCAGAGAGGAAAAAGTGACTTGCCC
AAGGTCGTAAGCAAGCTACTGGCATGGCAAGAGCCCAGCTTCCTGACGGAGCGCAACATTTCTCCACTGCACTGT
GCTAGCAGCTCAGCAGGGCCTCTAACCTGTGATGTCACACTCAAGAGGCCTTGGCAGCTCCTAGCCATAGAGCTT
CCTTTCCAGAACCCTTCCACTGCCCAATGTGGAGACAGGGGTTAGTGGGGCTTTCTATGGAGCCATCTGCTTTGG
GGACCTAGACCTCAGGTGGTCTCTTGGTGTTAGTGATGCTGGAGAAGAGAATATTACTGGTTTCTACTTTTCTAT
AAAGGCATTTCTCTATATACATGTTTTATATACCTCATTCTGACACCTGCATATAGTGTTGGGAAATTGCTCTGCA
TTTGACTTAATTAAAAA

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FIGURE 1138

MLLAWVQAFLVSNMLLAEAYGSGGCFWDNGHLYREDQTSPAPGLRCLNWLDASGLASAPVSGAGNHSYCRNPDE
DPRGPWCYVSGEAGVPEKRPCEDLRCPETTSQALPAFTTEIQEASEGPGADEVQVFAPANALPARSEAAAVQPVI
GISQVRMNSKEKKDLGTLGYVLGITMMVIIIAIGAGIILGYSYKRGKDLKEQHDQKVCEREMQRITLPLSAFTN
PTCEIVDEKTVVVHTSQTPVDPQEGSTPLMGQAGTPGA

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FIGURE 1139

CGGACGCGTGGGGAGAGGCTGTTTACCAGAACAGCATAACAAGGGCAGGTCTGACTGCAAGGCTGGGACTGGGAG
GCAGAGCCGCCGCCAAGGGGGCCTCGGTAAACACTGGTCGTTCAATCACCTGCAAGACGAAGGAGGCAAGGATG

CTGTTGGCCTGGGTACAAGCATTCTCGTCAGCAACATGCTCCTAGCAGAAGCCTATGGATCTGGAGGCTGTTTC
TGGGACAACGGCCACCTGTACCGGGAGGACCAGACCTCCCCCGCGCCGGGCTCCGCTGCCTCAACTGGCTGGAC
GCGCAGAGCGGGCTGGCCTCGGCCCCCGTGTGCGGGGCGCGGAATCACAGTTACTGCCGAAACCCGGACGAGGAC
CCGCGCGGGCCCTGGTGCTACGTCAGTGCGGAGGCCGCGCTCCCTGAGAAACGGCCTTGCGAGGACCTGCGCTGT
CCAGAGACCACCTCCCAGGCCCTGCCAGCCTTCACGACAGAAATCCAGGAAGCGTCTGAAGGGCCAGGTGCAGAT
GAGGTGCAGGTGTTGCTCCTGCCAACGCCCTGCCGCTCGGAGTGAGGCGGCAGCTGTGCAGCCAGTGATTGGG
ATCAGCCAGCGGGTGCGGATGAACTCCAAGGAGAAAAAGGACCTGGGAACCTCTGGGCTACGTGCTGGGCATTACC
ATGATGGTGATCATCATTGCCATCGGAGCTGGCATCATCTTGGGCTACTCCTACAAGAGGGGGAAGGATTTGAAA
GAACAGCATGATCAGAAAGTATGTGAGAGGGAGATGCAGCGAATCACTCTGCCCTTGCTGCCTTCACCAACCCC
ACCTGTGAGATTGTGGATGAGAAGACTGTCGTGGTCCACACCAGCCAGACTCCAGTTGACCCCTCAGGAGGGCAGC
ACCCCCCTTATGGGCCAGGCCGGGACTCCTGGGGCTTGAGCCCCCCCCAGTGGGCAGGAGCCCATGCAGACACTGG
TGCAGGACAGCCCACCCTCCTACAGCTAGGAGGAATACTACTTTGTGTTCTGGTTAAAAACCTACCCTCCCCC
GCTTTTTTGGCGAATCCTAGTAAGAGTGACAGAAGCAGGTGGCCCTGTGGGCTGAGGGTAAGGCTGGGTAGGGTC
CTAACAGTGCTCCTTGTCCATCCCTTGGAGCAGATTTTGTCTGTGGATGGAGACAGTGGCAGCTCCCACAGTGAT
GCTGCTGCTAAGGGCTTCCAAACATTGCCCTGCACCCCTGGAACCTGAACCAGGGATAGACGGGGAGCTCCCCAGG
CTCCTCTGTGCTTTACTAAGATGGCCTCAGTCTCCACTGTGGGCTTGAGTGGCATACTGTTATTTCATGGTTAA
GGTAAAGCAGGTCAAGGGATGGCATTGAAAAAATATATTTAGTTTTTTAAAAATATTTGGGATGGAACCTCCCTACTG
ACCTCTGAGAACTGGAACGAGTTTGTACAGAAGTCAGAACTTTGGGTTGGGAATGAGATCTAGGTTGTGGCTGC
TGGTATGCTTCAGCTTGCTGGCAATGATGTGCCTTGACAACCGTGGGCCAGGCCTGGGCCCAGGACTCTTCCTG
TTTCATAAGGAAAGGAAGAATTGCACTGAGCATTCCACTTAGGAAGAGGATAGAGAAGGATCTGCTCCGCCCTTG
GCCACAGGAGCAGAGGCAGACCTGGGATGCCCCAGTTTCTCTTCAGGGATGGATAGTGACCTGTCTTCATTTTGC
ACAGGTAAGAGAGTAGTTAGCTAACCTATGGGAATTATACTGTGGGGCCTTGTGAGCTGCTTCTAAGAGGCTAAC
CTGGAAACTAAGCTCAGAGGCAAGGTAATAAAGCACTTCAGGGCTTGCTCCCCAAGTGGGCCTGATTTAGCAGGT
GGTCCTGCGGGCGTCCAGGTGAGCACCTTCCTGTAGGGCACTGGGGCTAGGGTCACAGCCCCTAACTCATAAAGC
AATCAAAGAACCATTAGAAAGGGCTCATTAAGCCTTTTGGACACAGGACCCAGAGAGGAAAAAGTGAATTGCC
AAGGTCGTAAGCAAGCTACTGGCATGGCAAGAGCCCAGCTTCCTGACGGAGCGCAACATTTCTCCACTGCACTGT
GCTAGCAGCTCAGCAGGGCCTCTAACCTGTGATGTCACTCAAGAGGCCCTTGGCAGCTCCTAGCCATAGAGCTT
CCTTTCCAGAACCCTTCCACTGCCCAATGTGGAGACAGGGGTTAGTGGGGCTTTCTATGGAGCCATCTGCTTTGG
GGACCTAGACCTCAGGTGGTCTCTTGGTGTTAGTGATGCTGGAGAAGAGAATATTACTGGTTTCTACTTTTCTAT
AAAGGCATTTCTCTATATACATGTTTTATATACCTATTCTGACACCTGCATATAGTGTGGGAAATTGCTCTGCA
TTTGACTTAATTAAAAAAAAAAAAAAAAA

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FIGURE 1140

MLLAWVQAF LVSNMLLAEAYGSGGCFWDNGHLYREDQTSPAPGLRCLNWLD AQSGLASAPVSGAGNHSYCRNPDE
DPRGPWCYVS GEAGVPEKRPCEDLRCPETTSQALPAFTTEIQEASEGPGADEVQVFAPANALPARSEAAAVQPVI
GISQVRMNSKEKKDLGTLGYVLGITMMVIIIAIGAGIILGYSYKRGKDLKEQHDQKVCEREMQRITLPLSAFTN
PTCEIVDEKTVVHTSQTVPDPQEGSTPLMGQAGTPGA

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FIGURE 1141

GCGGAGCGCGCAGCGGGGGCTGCAGATTCTTTCCACCATGGCCAGACGCCCCGGAACAGCAGGGCCTGGCACTT
CGTCCTGAGTGCAGCCCGCCGAGACGCAGATGCCCCGGGCGTGGCTCTAGCAGGCTCCACTAACTGGGGCTACGA
CTCTGATGGGCAGCACAGCGACTCGGACTCCGACCCCGAGTACTCCACGCTGCCGCCATCCATCCCCAGTGCGGT
GCCCCGTGACCGGCGAGTCCTTCTGTGACTGTGCTGGGCAGAGCGAGGCCTCCTTCTGTAGCAGCCTGCACTCGGC
CCACCGGGGCGAGGACTGCCGCTGCGGAGAGGAAGACGAGTATTTTCGACTGGGTCTGGGATGACTTAAATAAGTC
ATCAGCCACCCTGCTGAGCTGTGACAACCGTAAGGTCAGCTTCCACATGGAGTACAGCTGCGGCACAGCGGCCAT
CCGGGGCACCAAGGAGCTGGGGGAGGGCCAGCACTTCTGGGAGATCAAGATGACCTCTCCCGTCTACGGCACC GA
CATGATGGTGGGCATCGGGACGTCCGATGTGGACCTGGACAAATACCGCCACACGTTCTGCAGCCTGCTGGGCAG
GGATGAGGACAGCTGGGGCCTCTCCTACACGGGCCTCCTCCACCACAAGGGCGACAAGACCAGCTTCTCGTCGCG
GTTCCGGCCAGGGCTCCATCATTGGCGTGACCTGGACACCTGGCACGGCACACTCACCTTTTTCAAGAACAGGAA
GTGTATAGGTGTGGCAGCCACCAAGCTGCAGAACAAAGAGATTCTACCCGATGGTGTGCTCCACGGCGGGCCGGAG
CAGCATGAAGGTCACCCGCTCCTGTGCCAGCGCCACTTCCCTCCAGTACCTGTGCTGCCACCGCCTGCGCCAGCT
GCGGCCAGACTCGGGAGACACGCTGGAGGGTCTGCCGCTGCCGCCGGGCCTCAAGCAGGTGCTACACAACAAGCT
GGGCTGGGTCTTGAGCATGAGTTGCAGCCGCCGCAAGGCTCCAGTGTCCGATCCCCAGGCAGCGACCTCCGCCCCA
CCCCAGCAGTCGCGAGCCTCGGCCCTGCCAGAGGAAGCGCTGCCGCCGGACCTGACTGACTTCCCAGTGGAAGTG
CCTTCTTGGGCTGGGACAGCCCTTTCTCTGTCCCTTCTTTCTCTGTCCCTTCTTCCAGCCACACTCCAGGGC
GGAGTTGGATGAGGCCCGTCCGGAGGGAGCCATCTCTTGCTCCCGAGGCTGGGACAGTCCTTTCTGTGGGGGCTC
TAGGGCCCTCTGCTGCTGTGCTGGGTGGGGAAGCGGCTGCCCTGAGCCCCAGGTCTTGTGGGAGGCTGCGAGGA
CGAGAGCCTGGCTGGAGCCCGGTTGCTGTTCCACAGGGCCTCGGTTTTTCTTAAGTTGCTCTGCATGCTGTCA
GCGGCTGCCCCGCCGTCATAGACTTAAAGGACTGCAATAAATGTAGAGTTGATGTCTAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

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FIGURE 1142

GTTGTGAGCTGCGGCAGAGACTGGTGGCTGGAGGAGACGCCGGCGCTGGAGAGTGCCTGCGCCGCCCGCCGCTG
AGGGACCGCGGGGTTAGCCACTGCTGGCTGCTTCCAGTGTTTCGCCGAGAGGTACCGGGGGTGACAGCTCCGGGAC
CGGCCGAAAGGCGAGGAACCGGTGTGGAAATTAAAAAGAACACACATATTTTACTGGGGCTTTGATCAACCAAAT
GCTAAAAAGCCACACAAAGAAGATCCCTAATAGTCATTTCTCAACAATTATATAGTCAACTGATGTAACAATGGT
ACTAATATTGGGACGCAGACTAAACAGAGAGGATCTTGGGGTGCGTGATTCCCCAGCAACTAAGCGAAAAGTTTT
TGAAATGGACCCCAAATCTCTGACAGGTCATGAGTTTTTTGACTTCTCTTCAGGATCATCCCATGCCGAAAACAT
ACTCCAGATATTTAATGAATTTTCGTGATAGCCGCTTATTCACAGATGTTATCATTGTGTGGAAGGAAAAGAATT
TCCTTGCCATAGAGCTGTGCTCTCAGCCTGTAGCAGCTACTTCAGAGCTATGTTTTGTAATGACCACAGGGAAG
CCGAGAAATGTTGGTTGAGATCAATGGTATTTTAGCTGAAGCTATGGAATGTTTTTGCAGTATGTTTATACTGG
AAAGGTGAAGATCACTACAGAGAATGTACAGTATCTCTTGTAGACATCAAGCCTCTTTCAGATTAGTGTCTCCG
TGATGCATGTGCCAAGTTCTTGGAGGAGCAACTTGATCCTTGTAATTGCTTAGGAATCCAGCGCTTTGCTGATAC
CCATTCACTCAAAACACTCTTCACAAAATGCAAAAATTTTGCCTTACAGACTTTTGAGGATGTATCCCAGCACGA
AGAATTTCTTGAGCTTGACAAAGATGAACTTTATGTTGTCCGTGGCTATGATGGGCAAAACAGACTTAGCAGCGT
AGAATGTTATGATTCCTTTTCAAATCGATGGACTGAAGTTGCTCCCTTAAGGAAGCCGTGAGTTCTCCTGCAGT
GACTAGCTGTGTAGGCAAACCTGTTTGTGATTGGTGGAGGACCTGATGATAATACTTGTCTGATAAGGTTCAATC
TTATGATCCAGAAACCAATTCTTGGCTACTTCGTGCAGCTATCCCAATTGCCAAAAGGTGTATAACAGCTGTATC
CCTAAACAACCTGATCTATGTTGCCGGTGGACTGACCAAGGCAATATGCTGTTACGATCCAGTTGAAGATTACTG
GATGCACGTACAGAATACATTCAGCCGTCAGGAAAACCTGTGGTATGTCTGTGTGTAATGGTAAAAATATATATCCT
GGGCGGAAGACGGGAAAATGGAGAAGCCACAGACACTATTTCTGTGTTATGATCCTGCAACAAGTATCATCACAGG
GGTAGCTGCAATGCCAGGCCAGTGTCTATCATGGCTGTGTGACTATTCATAGATACAATGAGAAATGCTTTAA
ACTCTGAAGACAGGATACCTCACCGAAGAAGCCACACTGATCCAAGATGGGAGGTTTTTAAAACTCTACAGTGGG
AACTTCACATATCTCCTTTGTGCCATATGCAAAAAATAGTAAAAATAATAATTTGGTGCCTTTCTCCTCAAAATA
TCAATCTTTCAAACTATAATAAAGCCTTTCCTATAATTGAAAAAAAAAAAAAAAAA

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FIGURE 1143

MVLILGRRLNREDLGVRDSPATKRKVFEMDPKSLTGHEFFDFSSGSSHAENILQIFNEFRDSRLFTDVIICVEGK
EFPCHRAVLSACSSYFRAMFCNDHRESREMLVEINGILAEAMECFLOQYVYTGKVKITTENVQYLFETSSLFQISV
LRDACAFLFEEQLDPCNCLGIQRFADTHSLKTLFTKCKNFALQTFEDVSQHEEFLELDKDELYVVGGYDGNRLS
SVECYDSFSNRWTEVAPLKEAVSSPAVTSCVGKLFVIGGGPDDNTCSDKVQSYDPETNSWLLRAAIPIAKRCITA
VSLNNLIYVAGGLTKAICCYDPVEDYWMHVQNTFSRQENCGMSVCNGKIYILGGRRENGEATDTILCYDPATSII
TGVAAMP RPVS YHGCVTIHRYNEKCFKL

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FIGURE 1144

GATCAATGGTATTTTAGCTGAAGCT**ATCG**AATGTTTTTGCAGTATGTTTATACTGGAAAGGTGAAGATCACTAC
AGAGAATGTACAGTATCTCTTTGAGACATCAAGCCTCTTTTCAGATTAGTGTTCTCCGTGATGCATGTGCCAAGTT
CTTGGAGGAGCAACTTGATCCTTGTAATTGCTTAGGAATCCAGCGCTTTGCTGATACCCATTCACTCAAAACACT
CTTCACAAAATGCAAAAATTTTTCGTTACAGACTTTTGAGGATGTATCCCAGCACGAAGAATTTCTTGAGCTTGA
CAAAGATGAACCTTATTGATTATATTTGTAGTGATGAACCTTGTTATTGGTAAAGAGGAGATGGTTTTTGAAGCCGT
CATGCGTTGGGTCTATCGTGCCGTTGATCTGAGAAGACCACCTGTTACACGAGCTCCTGACACATGTGAGACTCCC
TCTGTTGCATCCCAACTACTTTGTTCAAACAGTTGAAGTGGACCAATTGATCCAGAATTCTCCTGAGTGTTATCA
GTTGTTGCATGAAGCAAGACGGTACCACATACTTGGGAATGAAATGATGTCCCAAGGACTAGGCCACGCAGGTC
CACTGGCTATTCTGAGGTGATAGTTGTCGTTGGAGGATGTGAGCGAGTTGGAGGATTTAATCTTCCATACACTGA
GTGCTACGATCCTGTAACAGGAGAATGGAAGTCTTTGGCTAAGCTTCCAGAATTTACCAAATCAGAGTATGCAGT
CTGTGCTCTAAGGAATGACATTCTTGTTTCAGGTGGAAGAATCAACAGCCGTGATGTCTGGATTTATAACTCACA
GTTAAATATTTGGATCAGAGTTGCCTCTCTCAATAAAGGCAGATGGCGTCACAAAATGGCTGTCTCTCCTTGGTAA
AGTATATGTTGTCGGTGGCTATGATGGGCAAAACAGACTTAGCAGCGTAGAATGTTATGATTCTCTTTCAAATCG
ATGGACTGAAGTTGCTCCCCTTAAGGAAGCCGTGAGTTCTCCTGCAGTGAAGTGTGTTAGGCAAACTGTTTGT
GATTGGTGGAGGACCTGATGATAATACTTGTCTGATAAGGTTCAATCTTATGATCCAGAAACCAATTCTTGGCT
ACTTCGTGCAGCTATCCGAATTGCCAAAAGGTGTATAACAGCTGTATCCCTAAACAACCTGATCTATGTTGCCGG
TGGACTGACCAAGGCAATATACTGTTACGATCCAGTTGAAGATTACTGGATGCACGTACAGAATACATTACAGCCG
TCAGGTAATAACA**TGA**AGCAGTACAAAAGAAAAATAAATCTAAGAGGGACCAAGTACATAATCATTATTAATACA
CTGGAATTTCAATTTTAAAATATTTCAGGCTGGGCGTGGTGGCTCACGCCTGTGGTCCCAGCACTTTGGGAGGCC
GAGGTGGATAGATCACTTGAGGTCAGGAGTTCAAGACCAGCCTGGCTAATATGGTGAAACCCCGTCTCTACTAAA
AAATTATGGCCAGGCGTGGTGGTTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGCCAATCACCTGA
GGTCGGGAGTTTCGAGACCAGCCTGACCAACATGGAGAAACCCCGTCTCTGCTAAAAATACAAAATTAGCTGGGCG
TGGTGGCGCATTGCCTGTAATCCCAGCTACTAGGGAGGCTGCGGCAGGAGAATTGCTTGAACCCGGGAGGTGGAG
GTCGCGGTGAGCCGAGATCGAGCCATTGCACTCCAGCCTGGACAGCAGGAGCGAACTCCGTCTCAAAAATAAAT
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1145

MECFLOQYVYTGKVKITTENVQYLFETSSSLFQISVLRDACAKFLEEQLDPCNCLGIQRFADTHSLKTLFTKCKNFA
LQTFEDVSQHEEFLELDKDELIDYICSDELVIGKEEMVFEAVMRWVYRAVDLRRPLLHELLTHVRLPLLHPNYFV
QTVEVDQLIQNSPECYQLLHEARRYHILGNEMMSPRTRPRRSTGYSEVIVVVGGCERVGGFNLPTYECYDPVTGE
WKSLAKLPEFTKSEYAVCALRNDILVSGGRINSRDVWIYNSQLNIWIRVASLNKGRWRHKMAVLLGKVYVVGGYD
GQNLSSVECYDSFSNRWTEVAPLKEAVSSPAVTSCVGKLEFVIGGGPDDNTCSDKVQSYDPETNSWLLRAAIRIA
KRCITAVSLNNLIYVAGGLTKAIYCYDPVEDYWMHVQNTFSRQVIT

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FIGURE 1146

GCAGAGGTGCGGCCGGGGAGGCGCGCGGAGGCTGGAGCTGGAGGCGCGGCCGGGTGAGCTGAGAACCATGTGTG
CTCAGTATTGCATCTCCTTTGCTGATGTTGAAAAAGCTCATATCAACATTGAGATTCTATCCACCTCACACCAG
TGCTAACAAAGCTCCATTTTGAATCAACTAACAGGGCGCAATCTTTTCTTCAAATGTGAACTCTTCCAGAAAACAG
GATCTTTTAAAGATTGCTGGTGCTCTCAATGCCGTGAGAAGCTTGGTTCTGATGCTTTAGAAAGGAAGCCGAAAG
CTGTTGTTACTCACAGCAGTGGAACCATGGCCAGGCTCTCACCTATGCTGCCAAATTGGAAGGAATTCTTGCTT
ATATTGTGGTGCCCCAGACAGCTCCAGACTGTAAAAAAGCTTGAATACAAGCCTACGGAGCGTCAATTGTATACT
GTGAACCTAGTGATGAGTCCAGAGAAAATGTTGCAAAAAGAGTTACAGAAGAAACAGAAGGCATCATGGTACATC
CCAACCAGGAGCCTGCAGTGATAGCTGGACAAGGGACAATTGCCCTGGAAGTGCTGAACCAGGTTCTTTGGTGG
ATGCACTGGTGGTACCTGTAGGTGGAGGAGGAATGCTTGCTGGAATAGCAATTACAGTTAAGGCTCTGAAACCTA
GTGTGAAGGTATATGCTGCTGAACCCTCAAATGCAGATGACTGCTACCAGTCCAAGCTGAAGGGGAAACTGATGC
CCAATCTTTATCTCCAGAAACCATAGCAGATGGTGTCAAATCCAGCATTGGCTTGAACACCTGGCCTATTATCA
GGGACCTTGTGGATGATATCTTCACTGTACAGAGGATGAAATTAAGTGTGCAACCCAGCTGGTGTGGGAGAGGA
TGAAACTACTCATTGAACCTACAGCTGGTGTGGAGTGGCTGCTGTGCTGTCTCAACATTTTCAAAGTGTTCCTC
CAGAAGTAAAGAACATTTGTATTGTGCTCAGTGGTGGAAATGTAGACTTAACCTCCTCCATAACTTGGGTGAAGC
AGGCTGAAAGGCCAGCTTCTTATCAGTCTGTTTCTGTTTAAATTTACAGAAAAGGAAATGGTGGGAATTCAGTGTCT
TTTAGATACTGAAGACATTTTGTTCCTAGTATTGTCAACTCTTAGTTATCAGATTCTTAATGGAGAGTGGCTAT
TTCATTAAGATTTAATAGTTTTTTTTTGGACTAAGTAGTGGAAAACTTTTATACTTAACTGAGACATTTTGTCAA
GGCTAAAAAAAAGTCTTGCAAAATGGGGCAGTGGACTGACAGGCTGACATAGAAAATAAACTTTGCCCAATCACA
ACTTGTGCCTCCCATCCCTGGAGTACTGACTGGCACCGGTAAGACAGAATCTCTCTGAATCCATTACTCCATGCC
CCCTTGAGGCACGTGTGAAGAAATCTCACTTTTCAGCCAGGGTACTGGTTCTGGTACATATGGATCATAAGTCCA
TTTGGGGAAGACTCGTTTATACAGGTTTATCAGTACTGTGTCTTGAGATTTTAGCTTCCCATCAAAGCTGCATTT
CATGTGGCCATGGGTACCTAGAAAGACATCAGAAACAAAGTCGGTCAAATTTAAAGTAGAAAATTTTAAAGCAATGA
CTTCCAACCCAACAGTCATTTAGCAACACTGCAGAAATGCAGACATGGTCTCAAATCCCGTGTTCCTTACCTAA
AGGTTCTTGATATGTCCTCTCCGGCCCCACTTCGTTCTCAGTTCCACTGGTTTTAAACCACAGCACATCCTCTTA
GAATCAAACACATTAAGACCAAGATGAAACATTTACCCACAAAATGTAAACCCAACCTTTATACCACAAAGGCA
ATCAGATCCCATCCTCCTCCTTCATACCCACCTCTGTTGAAGAACATGTAACGTACTACTGCCATCTTAGTAAAA
ATTTTGAAAGGATGACCACTCAGAACAACCTCTCTTGATGACCATTCTGTCTGGATCTACTGACATAAGATGGCCT
GTAGCAATGAGGCTGTGCATTCTAAAGGACAAAAGCAAAGAAGCTATTTAGGAATTTACAGGCCAAAGTCTTCA
TTTATTGCCAGTCCATTTAAAGACCCATGCAAGAGCCTGGTTTGTATCCCTGCCCTAGCCCAATCTGAGGCTA
AGATTGGTAAACTGTAAAGCCACACTTAACCTTGTCATAGGTTCTTGAAAACCTGTACTTCAAGAGAAATGATG
TATAACAAAACCATACTTTTTCTCATCAGTTGTTACAAGGAAAGGATGTTGAACAAAAGGCAGTTATTTGAGGAC
TGGCTATACACTGTTTCACGTAAAAGTTGGAGTTTTCAATGTTCTATTAACAATGTTAAATGAAGACTTACTGTA
TTTTGAAAACCATCATTACCTTCTCCATACCATTTGGCTCCCAAATTTAAATAAACAAGAGAAAACGGTGTTCAT
CT

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FIGURE 1147

MCAQYCISFADVEKAHINIRDSIHLTPVLTSSILNQLTGRNLFFKCELFQKTGSFKIRGALNAVRSLVPDALERK
PKAVVTHSSGNHGQALTYAAKLEGIPAYIVVPQTAPDCCKLAIQAYGASIVYCEPSDESRENVAKRVTEETEGIM
VHPNQEPAVIAGQGTIALEVLNQVPLVDALVVPVGGGGMLAGIAITVKALKPSVKVYAAEPSNADDCYQSKLK GK
LMPNLYPPETIADGVKSSIGLNTWPIIRD LVDDIFTVTEDEIKCATQLVWERMKLLIEPTAGVGVA AVL SQHFQT
VSPEVKNICIVLSGGNVDLTSSITWVKQAERPASYQSVSV

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FIGURE 1148

GGTTTTXTGGXXGGGGGTTTTCAACXCXGGCTCTTGTTCTTTTTGCAGGACCCATCGATTCTGAATTCGGCACGAG
CATCAGTATGCTTATGGATTTGATGACAGGCATAGCCTGGGCATATCACCTCATTGGTAAAGGGCTAGAGCCTTT
CTTTTTTATGGCACTTCTTTTTTTGAGATAGGGTCTTACTCTGTACCCTGGCTAGAGTACACTGGTACAATCAC
GGCTCAATGTAGGCTTAACCTCCTGGGCTCAGGTGTAIGTCACTATGCCCGGCTACTTTTTGTATTTTTTGGTAG
AGACGGCTTCGCCACGTTGCCCAGGCTGCAAGCGATATGCCTAGGCTCAAGCGATCTGCCACCTCAACTTCCGG
AAGTGCTGAGATTACAGGTGTGAGCCACTGCACCCAGCCTTTGCTTTATTTTTTATTTTTTGAGAGGTATGATTC
TTTCTAGAGATTTTTTCTCATGGCTACTATTAGATCAGGAATGGGTGATTGGAGATTATTAGATTCTAGGTTAAC
TTCTACCACTTTACCCTAATACATAAACTTTTTCCCTAAATXAATGATGGAAGGAATXAAXXXXAXCXXCCXCXT
XXCCXCTAXTACAAAAXCXCTAGCCCTTAXAACXTTXXGXXAGCTXXXTTXXCCTXXXTXTCCCXTXXTCXXXCC
CCXXCCTXXTTXTXCCXXXCTXXCTCXAXCCCCACXAXTXXCXXTXXXXCTXCXXAATAXATTXCXCXCXTXXC
TCCTCAXXXXCTXXTCXXXXCTCXX

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FIGURE 1149

ATTCCCTCCATCATTATTTAGGAAAAAGTTTTATGTATTAGGGTAAAGTGGTAGAAGTTAACCTAGAATCTAAT
AATCTCCAATCACCCATTCCTGATCTAATAGTAGCCATGAGAAAAAATCTCTAGAAAGAATCATACCTCTCAAAA
AATAAAAAATAAAACAAAGGCTGGGTGCAGTGGCTCACACCTGAGCCCAGGAGGTTAAGCCTACATTGAGCCGTG
ATTGTACCAGTGTACTCTAGCCAGGGTGACAGAGTAAGACCCTATCTCAAAAAAGAAGTGCCATAAAAAAGAAA
GGCTCTAGCCCTTTACCAATGAGGTGATATGCCCAGGCTATGCCTGTCTCATCAATCCATTACCTTCCTGGTGAT
GGCCATGAGAAAGTCCAGCACACAAACCATGCCCCAGACTGCATCTGTGCATACACAGAGTAAAAGCCCTGCTGC
TATACTATAAAATGGCACCTGAAAATAATCTCTACGGTATGTTTGAAAATTGGCAG

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FIGURE 1150

GCGAAGTGAAGGGTGGCCCAGGTGGGGCCAGGCTGACTGAATGTATCTCTAGCTATGGACTAAATAATACATGG
GGGGAAATAACAAGTATTCATGAGGGTGAAAATGTGACCCAGCAGGAAAATTACAACATTTTTCAATTGACGTT
GAATAGGATGAGTCATGGAATTTAAGTGATTACTGAAGATTATACTACTGGTAGATAGAAGAGCTAAAGAAAGA
TGGATACTATGATGCTGAATGTGCGGAATCTGTTTGAGCAGCTTGTCGCCGGGTGGAGATTCTCAGTGAAGGAA
ATGAAGTCCAATTTATCCAGTTGGCGAAGGACTTTGAGGATTTCCGTAAAAAGTGGCAGAGGACTGACCATGAGC
TGGGGAAATACAAGGATCTTTTGATGAAAGCAGAGACTGAGCGAAGTGCTCTGGATGTTAAGCTGAAGCATGCAC
GTAATCAGGTGGATGTAGAGATCAAACGGAGACAGAGAGCTGAGGCTGACTGCGAAAAGCTGGAACGACAGATTC
AGCTGATTGAGAGATGCTCATGTGTGACACATCTGGCAGCATTCAACTAAGCGAGGAGCAAAAAATCAGCTCTGG
CTTTTCTCAACAGAGGCCAACCATCCAGCAGCAATGCTGGGAACAAAAGACTATCAACCATTGATGAATCTGGTT
CCATTTTATCAGATATCAGCTTTGACAAGACTGATGAATCACTGGATTGGGACTCTTCTTTGGTGAAGACTTTCA
AACTGAAGAAGAGAGAAAAGAGGCGCTCTACTAGCCGACAGTTTGTGATGGTCCCCCTGGACCTGTAAAGAAAA
CTCGTTCCATTGGCTCTGCAGTAGACCAGGGGAATGAATCCATAGTTGCAAAAACACTACAGTGACTGTTCCCAATG
ATGGCGGGCCCATCGAAGCTGTGTCCACTATTGAGACTGTGCCATATTGGACCAGGAGCCGAAGGAAAACAGGTA
CTTTACAACCTTGGAACAGTGACTCCACCCTGAACAGCAGGCAGCTGGAGCCAAGAAGTGAACAGACAGTGTTGG
GCACGCCACAGAGTAATGGAGGGATGCGCCTGCATGACTTTGTTTCTAAGACGGTTATTAAACCTGAATCCTGTG
TTCCATGTGGAAAGCGGATAAAATTTGGCAAATTATCTCTGAAGTGTGAGACTGTCTGTGGTCTCTCATCCAG
AATGTCGGGACCGCTGTCCCTTCCCTGCATTCCCTACCTGATAGGAACACCTGTCAAGATTGGAGAGGGAATGC
TGGCAGACTTTGTGTCCAGACTTCTCCAATGATCCCCCTCCATTGTTGTGCATTGTGTAAATGAGATTGAGCAAA
GAGGTCTGACTGAGACAGGCCTGTATAGGATCTCTGGCTGTGACCGCACAGTAAAAGAGCTGAAAGAGAAATCC
TCAGAGTGAAAACCTGTACCCCTCCTCAGCAAAGTGGATGATATCCATGCTATCTGTAGCCTTCTAAAAGACTTTC
TTGAAACCTCAAAGAACCTCTTCTGACCTTTGCGCTTAACAGAGCCTTTATGGAAGCAGCAGAAATCACAGATG
AAGACAACAGCATAGCTGCCATGTACCAAGCTGTTGGTGAAGTGGCCAGGCCAACAGGGACACATTAGCTTTCC
TCATGATTCACTTGACAGAGAGTGGCTCAGAGTCCACATACTAAATGGATGTTGCCAATCTGGCTAAAGTCTTTG
GCCCTACAATAGTGGCCATGCTGTGCCCAATCCAGACCCAGTGACAATGTTACAGGACATCAAGCGTCAACCCA
AGGTGGTTGAGCGCCTGCTTTCCCTTGCCCTCTGGAGTATTGGAGTCAGTTCATGATGGTGGAGCAAGAGAACATTG
ACCCCTACATGTCAATTGAAAACCTCAAATGCCTTTTCAACACCACAGACACCAGATATTAAAGTGAGTTTACTGG
GACCTGTGACCACTCCTGAACATCAGCTTCTCAAGACTCCTTCATCTAGTTCCCTGTACAGAGAGTCCGTTCCA
CCCTCACCAAGAACACTCCTAGATTTGGGAGCAAAAGCAAGTCTGCCACTAACCTAGGACGACAAGGCAACTTTT
TTGCTTCTCCAATGCTCAAGTGAAGTCAACATCTGCCTGTTACTTCCCAGCATTGACTGACTATAAGAAAGGACAC
ATCTGTACTCTGCTCTGCAGCCTCCTGTACTCATTACTACTTTTAGCATTCTCCAGGCTTTTACTCAAGTTTAAAT
TGTGCATGAGGGTTTTATTAAAACTATATATATCTCCCTTCCCTTCTCCTCAAGTCACATAATATCAGCACTTTG
TGCTGGTCATTGTTGGGAGCTTTTAGATGAGACATCTTTCCAGGGGTAGAAGGGTTAGTATGGAATTGGTTGTGA
TTCTTTTTGGGGAAGGGGTTATTGTTCCCTTTGGCTTAAAGCCAAATGCTGCTCATAGAATGATCTTTCTCTAGT
TTCATTTAGAACTGATTTCCGTGAGACAATGACAGAAACCTACCTATCTGATAAGATTAGCTTGTCTCAGGGTG
GGAAGTGGGAGGGCAGGGCAAAGAAAGGATTAGACCAGAGGATTTAGGATGCCTCCTTCTAAGAACCAGAAGTTC
TCATTCCCCATTATGAACTGAGCTATAATATGGAGCTTTTCAAAAAATGGGATGCATTGAGGACAGAAGTGTGA
TGGGAGTATGCGTAGCTTTGATTTGGATGATTAGGTCTTTAATAGTGTTGAGTGGCACAACTTGTAAATGTGAA
AGTACAACCTCGTATTTATCTCTGATGTGCCGCTGGCTGAACTTTGGGTTTCATTTGGGGTCAAAGCCAGTTTTCT
TTTAAATGAATTCATTCTGATGCTTTGGCCCCCATACCCCCAACCTTGTCAGTGGAGCCCACTTCTAAAGGT
CAATATATCATCCTTTGGCATCCCAACTAACAATAAAGAGTAGGCTATAAGGGAAGATTGTCAATATTTTGTGGT
AAGAAAAGCTACAGTCATTTTTTCTTTGCACTTTGGATGCTGAAATTTTCCCATGGAACATAGCCACATCTAGA
TAGATGTGAGCTTTTTCTTCTGTTAAAATTATTCTTAATGTCTGTAAAAACGATTTTCTTCTGTAGAATGTTTGA
CTTCGTATTGACCCTTATCTGTAAAACACCTATTTGGGATAATATTTGGAAAAAAGTAAATAGCTTTTTTCAAAA
TGAAAAA

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FIGURE 1151

MDTMMNLVRNLFEQLVRRVEILSEGNEVQFIQLAKDFEDFRKKWQRTDHELKGYKDLLMKAETERSALDVKLKHA
RNQVDVEIKRRQRAEADCEKLERQIQLIREMLMCDTSGSIQLSEEQKSALAFNLRGQPSSSNAGNKRLSTIDESG
SILSDISFDKTDESLEDWSSSLVKTFKLKKREKRRSTSRQFVDGPPGPVKKTRSIGSAVDQGNESIVAKTTVTVPN
DGGPIEAVSTIETVPYWTRSRRTGTLPWNDSSTLNSRQLEPRTE TDSVGTPQSNNGMRLHDFVSKTVIKPESC
VPCGKRIKFGKLSLKCRDCRVVSHPECRDRCPLPCIPTLIGTPVKIGEGMLADFVSQTSPMIPSIVVHCVNEIEQ
RGLTETGLYRISGCDRTVKELKEKFLRVKTVPLLSKVDDIHAICSLKDFLRNLKEPLLTFRNLRAFMEAAEITD
EDNSIAAMYQAVGELPQANRDTLAFMLIHLQ RVAQSPHTKMDVANLAKVFGPTIVAHAVPNPDPVTMLQDIKRQP
KVVERLLSLPLEYWSQFMMVEQENIDPLHVIENSNAFSTPQTPDIKVSLLGPVTTPEHQLLKTPSSSSLSQRVRS
TLTKNTPREFGSKSKSATNLGRQGNFFASPMLK

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FIGURE 1152A

GAGATGGTGCCATTGCACTCCAGCCTGAGCGACAAGAGCGAAACTCTCTCTCAAAAAAAAAAAAAAAAAATCCAAT
CCTGGCTGGGCGCAGTGGTTTCATGCCTGTCATCACAACTTTGGAAGGCCAAGGTTAGAGGATTGCTTGAGCCC
AGAAGTTCAAGACCAGCCTACGCAACATGGCAAGAACTTTCTCTACAAAAAACAAAAAAAAATTTTTTTTTTG
AGACAGGGTTTTCACTCTGTCAACCAGGCTGGAGAGCAGTGGCAGGATCTCAGCTCACTGCAACCTCTGCCTCCTGG
GCTTAAGTGTCTTGCTGCCTCAGCCTCCCAGGTAGCTGGGATTATAGGCACGTGCCACCACGCTCAGCTAATTT
TTGTACTTCTTAGTAGAGACTGTGTTTCACCATGTTAGCCAGGCTGGTCTCCAACCTCTTGACCTCAGATAATCCA
CCTGCCTTGCGTGAGCCACAGCTCCTGGCCAAAAAAAAATTTTTTTTAAATTAGGCAGGTGTGGTGGCACATG
CTTCAAGTCCAAGCGATTTGAGAGGCTGAGGTGGGAGGATTGCTTATGCCAGGAGATCGATGATGCAGTGAGCT
ATTGTAGTGCCACTGCCCTCCAGCATGGGCAACAGAGTAAGACCCTGTCTCAAAAAATAAAAAATAAAATAAATC
CAAGCCTTTTGAAGTCCACAGCCACTCTTTGTATTGTACGTCAAGGGACAGGAGGAGCTTGCCGTTAATTGCTTCC
GGGAACCTAGATACTAGGTTACACTGTCTTTAAATTTAATTTTCTCTGTTCTTGCTCTTACAGGATAACTATAA
TGGGATGAGCTTTGTCTGTATTGGGGCTATCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCATTC
CTGGTTTTATTGTGGCCGAACCTCTTCAGCCAGGGCCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTG
GACCTCCAACCTTCTAGTCGGATTGCTCTTCCCTCCGCTGCTGTAAGTAAACTCACCTTATCTTAAAACCAGCC
TATGTAAGCTGACATGAAGATACTCCTTAATAACAGTAGTCTGGGCCTGGCATGGTGGCTCATGCCGTGTAATC
CTAGCACTGTGGGAGGCTGAGGCAGGTGGATCACCTGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGGTGA
AATTCAAAAATTAGCTGGGCATGGTGGTGCATGCCTGTAATTCAGCTACTTGGGAGATCGAGGAAGGAGAATCG
CTTAAACCTGGGAGGTGGAGGTTGCAGCGAGCTGAGATCGCGCTACTGCACTCTAGCCTGCTCGATGGAAGCAAG
ACTCCATCCCTAAATAAATAAAAAAATACAGCAGTCCCTCCTCTTCTTCAGTTTCAGTTACCTGTAGTCTAAAAA
TATTAAATGAAAATTGCAGAAATAAATAATTCATAAAGTTTAAATTTGCGGCCAGACACAGTGGCTCAAGCCTGT
AATTCCAGCACTTTGAGAGGCCTAGGCGGGTGGATAACTTGAGGTGAGGAGTTGGGGACCAACCTGACTATCATG
GTGAAACCCTGTTTCTACAATAAATAACAAAAATTAGGCCGGGTGTCGTGGCTCATGACTGTAATCCAGTGAGCG
AGATCACACCATTTGCGGTAGACACACCTGTAGTCCTAGCTACTCAGAAGACTGAGGCAAGAGAATCACTTAAAC
CCAGGAGGTGTTTCATGGTGAGCTGTGATCAACCTTCTGCTCTCCAGCCTGGGTGACAGAGCGAGATTCCTGCTCA
AAAAAAAAAAAAATTCTATAAATAGAGATGGAGTTGCCAGGTTAGTCTCAAACTGCTGGGTTCCAGTGATCCTCCC
ACCTTGACCTCCCAAAGTGCTGGGATTATGGGCGTGAGCCACCGCACTCGGCCAGAAACACAGATTTTAAAAAT
AATACTCAAAAGTCCAAAAATACTCAGTAGACATTTGGAAGCATCTAACTGTAATGAAATGGAATGACAGAAAGA
AACTAGAGAGAATACTACAGTAAGTTAGCAATGGAATCATAAGCGAATCTGAAGAAACCTGTTTTATTAAATATG
GAAGGGTTATAGCTTGAAGCCTATTGGAATATGAATGTGAAGGAAATTGACTTTGTCAATGACCAGATTTTTAT
ATCAACCTTCTTTTTTCTGTCTTTCTCTAGCACTATTTAGGAGCCTACGTTTTTATTATCTTACCCGGCTTCC
TCATTACCTTCTTGGCTTTTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGG
CCTTTGAAGGGCAGGCACACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTG
CTAAGGAGACCACCACCAATGTCTAAGTGCCTCCTTCCACCTCCCTCCGGCATGGGAAAGCCACCTCTCCC
TCAACAAGGGAGAGACCTCATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCC
ACGCACTCCATGAGCACCCCAAGGCTGCGGTTTGTGGATCTTCAATGGCTTTTTAAATTTTATTTCTTGACAT
CCTCTTCTGCTTAGGAGAGACCGAGTGAACCTACCTTCATTTAGGAGGGATTGGCCGCTTGGCACATGACAACT
TTGCCAGCTTTTCTCCTTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTT
CCCCAACCTCAGACTTACCAGGAAGCAGATACATATGAGTGTGGAAGCCGAGGGTGTATGTAAGAGCACCT
TCTCACTTCCATACAGCTCTACGTGGCAAATTAACCTGAGTTTTATTATTTTATCCTCTGGTTTAATTACATA
ATTTTTTTTTTTTACTTTAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCC
ATGATGGAATATTTATTTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGA
GGTGTTTAAAGAGAGGTTATAGAGTAGAAGATTTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAA
ATGTTGTTTATTATTGGAGGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCTT
CAGATGGAACTCTTTAACTTCTCGTAAAAGTCATATACCTATATAATAAAGCTACTGATTTCTTTGGAGCTTT
TTTCTTTAAGATAATAGTTTACATGTAGTAGTACTTGAAATCTAGGATTATTAATAATATGGGCATTGTAGTTA
ATGATGGTTGATGGGTTCTAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCCCTC
ACTGGATGAAATAACTCCTTCTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAG
CCATCCAAATAAGAAACCTAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTCCACTTTGTTCTTTAGGAGA

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FIGURE 1152B

TTT TAGGTGTTGATTTTCTGTTGTATTTTAACTCATACCTTTAAAGGAATCCCCAAAGAATGTTTATAGCAAAC
TTGGAATTTGTAACTCAGCTCTGGGAGAGGATTTTTTCTGAGCGATTATTATCTAAAGTGTTGTTGCTTTA
GGCTCACGGCACGCTTGCGTATGTCTGTTACCATGTCACGTGTTGGTCCTATGCCGAATGCCCTCAGGGGACTTGAA
TCTTTCCAATAAACCAGGTTTAGACAGTATGAGTCAATGTGCAGTGTAGCCCACACTTGAGAGGATGAATGTATG
TGCACTGTCACTTTGCTCTGGGTGGAAGTACGTTATTGTTGACTTATTTTCTCTGTGTTTGTTTCTACAGCCCCCT
TTTTCATATGTTGCTCAGTCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTC
AGTGACAGTATTTTGGTTCTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAAATGCACGTAGCT
GAGGCCGGATGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTTTCGAGA
CCAGTCTGGCCAACATCGTGAAACCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCCT
GTAATCCCAGCTACTTGGGAAGCTGAGGCGGGAGAATCATGTGAACCGGGACGCAGGGGTTGCAGTGAGCGGAG
ATCGCATCATTGCACTCTAGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATC
GAGTGTGCTTTAGCTTGAAAAGGTGACCTTGCAACTTCATGTCAACTTCTGGCTCCTCAAACAGTAGGTTGGCAG
TAAGGCAGGGTCCCATTTCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCT
TTGTTTTAAATAAAAAATTCTGAATGTACACGACATTATGGGCTTATTTACTTTTTGTCTTCCTGTACCACAAA
ATGAGCTCTAAATCCTGACTTGGCTACTC

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FIGURE 1153

ATAATCTTCATTCTGGGTTCTCCACTTCAATAGTCGTGGCAGTGCTGCTGAATTTGCAGTTTTTCACATCATGA
CCAGGATTCTGGAAGCTACAAACAGTTTGTGTTTTACCTCTGCCTCCTGGTTTTTCATACTCTGCACACCATCCTCG
GGGTCCAGTGCTCTCCCTTTGCATAACCTGCTGCATTGCATTGACAGTGGAGTGTTGCTTCTCACTGAAACAGCTG
TCATAAGGCTCATGAAAGATCTGGATAATACAGAGAAAAATGAAAACTGAAATTCAGTATCATTGTGCGGCTTC
CTCCGCTTATTGGGCAGAAGATTTGTAGACTTTGGGATCATCCTATGAGTTCTAACATCATTTTCGCGGAACCACG
TGACGCGACTGCTTCAGAACTATAAGAAACAGCCTCGGAATTCATGATTAACAAGTCATCGTTCAGTGTAGAAT
TTCTGCCTCTGAACTACTTCATTGAAATTCGTACAGATATAGAGTCCTCCAATCAAGCCCTGTATCCTTTTGAAG
GACATGACAATGTGGATGCAGAATTTGTAGAGGAAGCAGCTCTGAAACACACCGCGATGCTTTTAGGCTTATGAA
AAAGAAAACGCAATTGGATCTGCTGCTGCCATTTTAATCTTGCTCATTAACTTACTCCTCTGAGAATTCCTTAA
CAATATTTAAAATTGGTAACAAAAATAGTTTAGCCATAATTGTTTAGCCATGTGAGTTTCAGGTTGGTACACGTT
CAGACAGAACTGCTGTATCACATTCCAATTTGAATAGCCAGTGAGCAATCAAGTGTAGAGAAATGATAAATGGC
CTAAGAAGGCATACAGTGGCATAAACGATGCTCTTCCTAGTAGCTTAATAGGCCCCACAAGCTAGTTTCTGTTGCA
CTCTGAAATAAAATATGCTTTAAAAATGTAGGGAACAGTGCTTAGAAAAGCAAAAAGCTAGGTGTGTCATTGAAAT
AATAGGCATAAAAATTAAATGTTACATAAGAACACTATTTGGAAAGAGGGTCCTTTTAAAAAGCTGAATTTGTACT
AAATCAGATTTGCCATGTCCAGTACAGAATAATTTGTACTTAGTATTTGCAGCAGGGTTTGTCTTTGTGAATTCA
GATGAAACATATTTATTTTTTTTTTATTTATAAAAGGTTGATTTAGGAATATTTTGTGAGTCATTAAAAAACCTGA
AAACATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1154A

CTCTCAGTGTCTCCAACTTTGCGCTGGAAGAAAACTTCCCGCGCGCCGGCAGAACTGCAGCGCCTCCTTTTAGT
GACTCCGGGAGCTTTCGGCTGTAGCCGGCTCTGCGCGCCCTTCCAACGAATAATAGAAATTGTTAATTTTAAACAAT
CCAGAGCAGGCCAACGAGGCTTTGCTCTCCCGACCCGAATAAGCTCCCTCGCTCCGTGCGCTGCTACGAGCGG
TGTCTCCTGGGGCTCCAATGCAGCGAGCTGTGCCGAGGGGTTCCGAAGGCGCAAGCTGGGCAGCGACATCGGGA
ACGCGGAGCGGGCTCCGGGGTCTCGGAGCTTTGGGCCCGTACCCACGCTGCTGCTGCTCGCCGCGGCGCTACTGG
CCGTGTGCGACGCACTCGGGGCGCCCTCCGAGGAGGACGAGGAGCTAGTGGTGCCGGAGCTGGAGCGCGCCCCGG
GACACGGGACCACGCGCCTCCGCCTGCACGCCTTTGACCAGCAGCTGGATCTGGAGCTGCGGCCGACAGCAGCT
TTTTGGCGCCCGGCTTCACGCTCCAGAACGTGGGGCGCAAATCCGGGTCCGAGACGCCGCTTCCGGAAACCGACC
TGGCGCACTGCTTCTACTCCGGCACCGTGAATGGCGATCCAGCTCGGCTGCGGCCCTCAGCCTCTGCGAGGGCG
TGCGCGGCGCCTTCTACCTGCTGGGGGAGGCGTATTTTCATCCAGCCGCTGCCCGCCGCCAGCGAGCGCTCGCCA
CCGCCGCCCCAGGGGAGAAGCCGCCGGCACCACTACAGTTCCACCTCCTGCGGCGGAATCGGCAGGGCGACGTCG
GCGGCACGTGCGGGGTGCTGGACGACGAGCCCCGGCCGACTGGGAAAGCGGAGACCGAAGACGAGGACGAAGGGA
CTGAGGGCGAGGACGAAGGGGCTCAGTGGTGC CGCAGGACCCGGCACTGCAAGGCGTAGGACAGCCACAGGAA
CTGGAAGCATAAGAAAGAAGCGATTTGTGTCCAGTCACCGCTATGTGGAACCATGCTTGTGGCAGACCAGTCA
TGGCAGAATTCCACGGCAGTGGTCTAAAGCATTACCTTCTCAGTTGTTTTCGGTGGCAGCCAGATTGTACAAAC
ACCCACGATTTCGTAATTCAGTTAGCCTGGTGGTGGTGAAGATCTTGGTCATCCACGATGAACAGAAGGGGCCGG
AAGTGACCTCCAATGCTGCCCTCACTCTGCGGAACTTTTGCAACTGGCAGAAGCAGCACAACCCACCCAGTGACC
GGGATGCAGAGCACTATGACACAGCAATTTCTTTTACCAGACAGGACTTGTGTGGGTCCCAGACATGTGATACTC
TTGGGATGGCTGATGTTGGAACGTGTGTGTGATCCGAGCAGAAGCTGCTCCGTCATAGAAGATGATGGTTTACAAG
CTGCCTTACCACAGCCCATGAATTAGGCCACGTGTTTAACATGCCACATGATGATGCAAAGCAGTGTGCCAGCC
TTAATGGTGTGAACCAGGATTCCACATGATGGCGTCAATGCTTTCCAACCTGGACCACAGCCAGCCTTGGTCTC
CTTGCACTGCCTACATGATTACATCATTTCTGGATAATGGTCATGGGGAATGTTTGATGGACAAGCCTCAGAATC
CCATACAGCTCCCAGGCGATCTCCCTGGCACCTCGTACGATGCCAACCCGGCAGTGCCAGTTTACATTTGGGGAGG
ACTCCAAACACTGCCCCGATGCAGCCAGCACATGTAGCACCTTGTGGTGTACCGGCACCTCTGGTGGGGTGCTGG
TGTGTCAAACCAAACACTTCCCGTGGGCGGATGGCACCAGCTGTGGAGAAGGGAAATGGTGTATCAACGGCAAGT
GTGTGAACAAAACCGACAGAAAGCATTTTGATACGCCTTTTTCATGGAAGCTGGGGAATGTGGGGGCCTTGGGGAG
ACTGTTTCGAGAACGTGCGGTGGAGGAGTCCAGTACACGATGAGGGAATGTGACAACCCAGTCCCAAAGAAATGGAG
GGAAGTACTGTGAAGGCAAACGAGTGCGCTACAGATCCTGTAACTTTGAGGACTGTCCAGACAATAATGGAAAAA
CCTTTAGAGAGGAACAATGTGAAGCACACAACGAGTTTTCAAAGCTTCTTTGGGAGTGGGCCTGCGGTGGAAT
GGATTTCCAAAGTACGCTGGCGTCTACCAAAGGACAGGTGCAAGCTCATCTGCCAAGCCAAAGGCATTGGCTACT
TCTTCGTTTTGCAGCCCAAGGTTGTAGATGGTACTCCATGTAGCCAGATTCCACCTCTGTCTGTGTGCAAGGAC
AGTGTGTAAAAGCTGGTTGTGATCGCATCATAGACTCCAAAAGAAGTTTGATAAATGTGGTGTGTTGCGGGGGAA
ATGGATCTACTTGTAAAAAATATCAGGATCAGTTACTAGTGCAAAACCTGGATATCATGATATCATCACAATTC
CAACTGGAGCCACCAACATCGAAGTGAAACAGCGGAACCAGAGGGGATCCAGGAACAATGGCAGCTTTCTTGCCA
TCAAAGCTGCTGATGGCACATATATTCTTAATGGTGACTACACTTTGTCCACCTTAGAGCAAGACATTATGTACA
AAGGTGTTGTCTTGAGGTACAGCGGCTCCTCTGCGGCATTGGAAAGAATTCGCAGCTTTAGCCCTCTCAAAGAGC
CCTTGACCATCCAGGTTCTTACTGTGGGCAATGCCCTTCGACCTAAAATTAAATACACCTACTTCGTAAAGAAGA
AGAAGGAATCTTTCAATGCTATCCCCACTTTTTTCAGCATGGGTCAATTGAAGAGTGGGGCGAATGTTCTAAGTCAT
GTGAATTGGGTGGCAGAGAAGACTGGTAGAATGCCGAGACATTAATGGACAGCCTGCTTCCGAGTGTGCAAAGG
AAGTGAAGCCAGCCAGCACCAGACCTTGTGCAGACCATCCCTGCCCCCAGTGGCAGCTGGGGGAGTGGTCATCAT
GTTCTAAGACCTGTGGGAAGGGTTACAAAAAAGAAGCTTGAAGTGTCTGTCCCATGATGGAGGGGTGTTATCTC
ATGAGAGCTGTGATCCTTTAAAGAAACCTAAACATTTCATAGACTTTTGCACAATGGCAGAATGCAGTTAAAGTGG
TTTAAGTGGTGTAGCTTTGAGGGCAAGGCAAAGTGAGGAAGGGCTGGTGCAGGGAAAGCAAGAAGGCTGGAGGG
ATCCAGCGTATCTTGCCAGTAACAGTGAGGTGTATCAGTAAGGTGGGATTATGGGGGTAGATAGAAAAGGAGTT
GAATCATCAGAGTAAACTGCCAGTTGCAAATTTGATAGGATAGTTAGTGAGGATTATTAACCTCTGAGCAGTGAT
ATAGCATAATAAAGCCCCGGGCATTATTATTATTATTCTTTTGTACATCTATTACAAGTTTAGAAAAAACAA
GCAATTGTCAAAAAAAGTTAGAACTATTACAACCCCTGTTTCTGGTACTTATCAAATAACTTAGTATCATGGGG
GTTGGGAAATGAAAAGTAGGAGAAAAGTGAGATTTTACTAAGACCTGTTTTACTTTACCTTACTAACAATGGGG

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FIGURE 1154B

GGAGAAAGGAGTACAAATAGGATCTTTGACCAGCACTGTTTATGGCTGCTATGGTTTCAGAGAATGTTTATACAT
TATTTCTACCGAGAATTAAACTTCAGATTGTTCAACATGAGAGAAAGGCTCAGCAACGTGAAATAACGCAAATG
GCTTCCTCTTTCCCTTTTTTGGACCATCTCAGTCTTTATTTGTGTAATTCATTTTGAGGAAAAACAACCTCCATGT
ATTTATTCAAGTGCATTAAAGTCTACAATGGAAAAAAGCAGTGAAGCATTAGATGCTGGTAAAAGCTAGAGGAG
ACACAATGAGCTTAGTACCTCCAACCTTCCTTTCTTCCTACCATGTAACCCTGCTTTGGGAATATGGATGTAAAG
AAGTAACTTGTGTCTCATGAAATCAGTACAATCACACAAGGAGGATGAAACGCCGGAACAAAAATGAGGTGTGT
AGAACAGGGTCCACAGGTTTGGGGACATTGAGATCACTTGTCTTGTGGTGGGGAGGCTGCTGAGGGGTAGCAGG
TCCATCTCCAGCAGCTGGTCCAACAGTCGTATCCTGGTGAATGTCTGTTTCAGCTCTTCTGTGAGAATATGATTTT
TTCCATATGTATATAGTAAATATGTTACTATAAATTACATGTACTTTATAAGTATTGGTTTGGGTGTTCCCTCC
AAGAAGGACTATAGTTAGTAATAAATGCCTATAATAACATATTTATTTTTATACATTTATTTCTAATGAAAAAAA
CTTTTAAATTATATCGCTTTTGTGGAAGTGCATATAAAATAGAGTATTTATACAATATATGTTACTAGAAATAAA
AGAACACTTTTGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1155

MGNAERAPGSRSGPVP TLLLLAAALLAVSDALGRP SEEDEELVPELERAPGHGTTRLRLHAFDQQLDLELRPD
SSFLAPGFTLQNVGRKSGSETPLPETDLAHC FYSGTVNGDPSSAAALSLCEGV RGA FYLLGEAYFIQPLPAASER
LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEPRPTGKAETED EDEGTEGEDEGAQWSPQDPALQGVGQP
TGTGSIRKKRFVSSHRYVETMLVADQSMAEFHGSLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQK
GPEVTSNAALT LRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCDTLGMADVGTVC DPSRSCSVIEDDG
LQA AFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPWSPCSAYMITSF LDNGHGEC LMDKP
QNP IQLPGLPGTSYDANRQCQFTFGEDSKHCPDAASTCSTLWCTGTSGGVLVCQTKHFPWADGTSCGEGKWCIN
GKCVNKTD RKHFDTPFHGSGWMWGPWGDCSRTC GGGVQYTMRECDNPVPKNGGKYCEGKRVRYRSCNLED CPDNN
GKTFREEQCEAHNEFSKASFGSGPAVEWIPKYAGVSPKDRCKLICQAKGIGYFFVLQPKVVDGTPCSPDSTSVCV
QGQCVKAGCDRIIDS KKKFDKCGVCGGNGSTCKKISGSVTS AKPGYHDIITIPTGATNIEVKQRNQRGSRNNGSF
LAIKAADGTYILNGDYTLSTLEQDIMYKGVVLRYSGSSAALERIRSFSPLKEPLTIQVLTVGNALRPKIKYTYFV
KKKKESFNAIPTFSAWVIEEWGECSKSCELGWQRRLVECRDINGQPASECAKEVKPASTRPCADHPCPQWQLGEW
SSSKTCGKG YKKRSLKCLSHDGGVLSHESCDPLKKPKHFIDFCTMAECS

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FIGURE 1156

GGCGGGCAGAAGTTGGAAACATGCGGCTGTCGGTCGCTGCAGCGATCTCCCATGGCCGCGTATTTGCGCGTATGG
GCCTCGGTCCCGAGTCCCGCATCCATCTGTTGCGGAACTTGCTCACAGGGCTGGTGCGGCACGAACGCATCGAGG
CACCATGGGCGCGTGTGGACGAAATGAGGGGCTACGCGGAGAAGCTCATCGACTATGGGAAGCTGGGAGACACTA
ACGAACGAGCCATGCGCATGGCTGACTTCTGGCTCACAGAGAAGGATTTGATCCCAAAGCTGTTTCAAGTACTGG
CCCCTCGGTACAAAGATCAAACCTGGGGGCTACACAAGAATGCTGCAGATCCCAAATCGGAGTTTGGATCGGGCCA
AGATGGCAGTGATCGAGTATAAAGGGAATTGCCTCCACCCCTGCCTCTGCCTCGCAGAGACAGCCACCTTACAC
TCCTAAACCAGCTGCTGCAGGGTTTGCGGCAGGACCTCAGGCAAAGCCAGGAAGCAAGCAACCACAGCTCCACA
CAGCTCAAACACCAGGGATTTAACTGGATCTGAAGAGTCTGCAGCCCTTAATCAGTACCCATGATCACAGGCCTT
TGGAGCACTTTTACTCTCTGAGAAGAACTGGAGCTAGAGATGTAAAATGGACAGTCTTGATGGGGTTGAGAACCT
TCTGGGGAGCCAGATGACCCTCTCTTTGCACAATAGATAAAAGTCTTTATATGAATATATATAAATTTATTTATT
TTTTCTTCTGTGGGATTTCTGGAGAATGAGAATTATCCAAATGCTCAGTCTACCTGAGATAGTAAATTCATGG
CTTATGCTTCTGGTCCTTAAATTTGGGTTATTTTGGTTAGTG

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FIGURE 1157

MRLSVAAAISHGRVFRRMGLGPESRIHLLRNLLTGLVRHERIEAPWARVDEMRYAEKLIDYGKLGDTNERAMRM
ADFWLTEKDLIPKLFQVLAPRYKDQTGGYTRMLQIPNRSLDRAKMAVIEYKGNCLPPLPLPRRDSHLTLNQLLQ
GLRQDLRQSQEASNHSSHTAQTPGI

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FIGURE 1158

GGGGGGAAACGGAAGTGAGCGGCGGGGTCGACTGACGGTAACGGGGCAGAGAGGCTGTTTCGCAGAGCTGCGGAAG
ATGAATGCCAGAGGACTTGGATCTGAGCTAAAGGACAGTATTCCAGTTACTGAACTTTCAGCAAGTGGACCTTTT
GAAAGTCATGATCTTCTTCGGAAAGGTTTTTCTTGTGTGAAAAATGAACTTTTGCCTAGTCATCCCCTTGAATTA
TCAGAAAAAAATTTCCAGCTCAACCAAGATAAAATGAATTTTTCCACACTGAGAAACATTCAGGGTCTATTTGCT
CCGCTAAAATTACAGATGGAATTCAAGGCAGTGCAGCAGGTTTCAGCGTCTTCCATTTCTTTCAAGCTCAAATCTT
TCACTGGATGTTTTGAGGGGTAATGATGAGACTATTGGATTTGAGGATATTCTTAATGATCCATCACAAAGCGAA
GTCATGGGAGAGCCACACTTGATGGTGGAATATAAACTTGGTTTACTGTAATAGTGTGCTGTTTCATGGAAACCGA
GGGCTGCATCTTGTATATAGTCATCTTTGTACTGTAATTTGATGTACACAACATTAAAAGTACTGACACCTGAGA
ATTTCTGCTCAAGTAGTATCAGTGATCATTTAAAATTTGGAGGGGTCTTTGGTTTACAGCCATGTGACAATTAAA
AGCACTAAAGGGAGATCATGTTAAAGCTCTTAATTTATATTAATAAACAGTAGCCTTTGTCTTTAAAAAAGTTGTTG
CTCATGAATATTATAAAATGATCTACAGGTTTCAATTCAACCTGTTTCTAGGTTTTTTTGTAATTTAGTTTTGA
TTAAGCATTATAAGCATTGAGTCTATAAACTTTATAGTAGCATCTTTCAGAATAAACATTTTAAATTGATTTCA
GTGGCAACTCTCAAATTGATTACAATATGAGATATATCAGTGTCGTCCATTAACTCATAAGAATAATATTAC
TGTGTCAGTGCTATTTTAGGATTATAGTTATTGTTTGATTATTTTCAGGTTGAAAAGTAGAAGTTCCAAGGTTTTG
ATTTTGGTCTGGTCTTTAAGTGAAAAATTAAAGCAACCAGTAGATGTAGGTTAACTTTTACTTCATAGACTTAA
TATGTGATTAATATATTGCCAAGCAACACTGTTAAAGAAAAGTAAAACCTCATTTTTCTTGTTCCTTAATTTATAT
ATTACAAGATACTGTAAGGTATTCTTTATGAAGTTGATATATAAAAATTTACATTTTTTAGAACATTAGTGAATGG
ATCATCTTTTACAATTAAAAGTATATTTTGATTATCAGTTTCTTAGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 1159

MNARGLGSELKDSIPVTELSASGPFESHDLRLKGFSCVKNELLPSHPLELSEKNFQLNQDKMNFSTLRNIQGLFA
PLKLQMEFKAVQQVQRLPFLSSSNLSLDVLRGNDETIGFEDILNDPSQSEVMGEPHLMVEYKLGLL

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FIGURE 1160A

TGAGGCGCGGGAGGCCCCGCGCCCCGCGGCTCGCTGTGCGTGGGAGGGCGCGAGCGAACGCGGGCGAGGAGCGGCC
GAGCCGCTGAAGAGGAGCTGGGCGCCGCGCCCGCCGCGCTCGGCCCCGCGGATCGCCTCCGCCCCGTCTTCGC
CGGCCCCGGCCCCCTGGCGAGATGCCGCTGTGGGGAGGATTGGCTCAGCCACCCGCTGGGAATCGTGCAGGGATTCT
TCGCCCCAAAATGGAGTTAATCCTGACTGGGAGAAGAAAGTAATTGAGTATTTAAGGAAAAGCTGAAGGAAAATA
ATGCTCCTAAGTGGGTACCATCACTGAACGAAGTTCCCTTCATTATTTGAAACCTAATAGTTTTGTGAAATTTT
GTTGCATGATTGAGGATATGTTTGACCCTGAGTTTTACATGGGAGTTTATGAAACGGTTAACCACAAACACAAAAG
CACATGTTCTTCATTTTGGAAAATATAGAGATGTAGCAGAGTGTGGGCCTCAACAAGAACTTGATTTAAACTCTC
CACGAAATACCACTTTGGAAAGACAGACTTTCTATTGTGTTCCGGTGCCTGGGGAATCTACGTGGGTAAAAGAAG
CCTATGTTAATGCAAACCAAGCTCGAGTCAGTCCCTCAACATCCTACACTCCTAGTCGCCACAAGAGGAGTTATG
AAGATGATGACGATATGGACCTACAGCCCAATAAGCAGAAAAGACCAACATGCAGGTGCCAGACAAGCAGGGAGTG
TTGGTGGTCTTCAATGGTGTGGAGAGCCAAAACGTTTAGAACTGAAGCTTCTACTGGGCAACAGCTGAACTCTC
TGAAGTTGCTCTCTCTCTTTTGAATTTGAATTTTCCATTGCCAGGAGAGAAGGGCCCTGCATGCCTTGTGAAGGTTT
ATGAAGATTGGGATTGTTTCAAAGTAAATGACATTCTTGAGCTATATGGCATACTGTCTGTGGATCCTGTGCTGA
GTATACTGAATAATGATGAAAGGGATGCCTCTGCACTGCTGGATCCGATGGAGTGCACAGACACAGCAGAGGAGC
AGAGAGTACACAGTCCCTCTGCTTCATTAGTGCCGAGAATTCATGTGATCTTAGCCAGAAGTTGCAACACATCA
ACCCATTATTGCCTGCCTGCCTTAACAAAGAGGAGAGCAAAACCTGTAAGTTTGTTCAGTTTCATGTCCGAAT
TGTCTCCAGTCAGAGCAGAACTTCTTGGGTTCCTTACTCATGCCCTTCTGGGGGATAGTTTGGCTGCTGAATACC
TTATATTACATCTCATCTCCACAGTATATACAAGAAGAGATGTCTTCCACTAGGAAAATTTACAGTTAACTTGA
GTGGTTGCCACGGAATAGTACCTTCACAGAACACTTGTATCGAATTATTCAACATCTTGTTCAGCATCTTTTC
GTCTGCAGATGACTATAGAGAACATGAACCAATTGAAATTCATTCCCCACAAAGACTACACAGCCAATCGCTTGG
TCAGTGGGCTCCTCCAGCTGCCAGCAATACTTCCCTGTAAATCGATGAGACTCTCCTGGAACAGGGGCAGCTGG
ATACCCCAGGTGTTTCATAATGTGACAGCCCTGAGCAACCTCATAACGTGGCAGAAGGTGGATTATGACTTCAGCT
ACCATCAGATGGAATTCCCCTGCAATATTAACGTTTTCATTACTTCGGAGGGGAGGTCACTCCTCCCGGCAGACT
GCCAGATTCACTTACAGCCCCAGCTAATTCACCAACATGGAGGAGTACATGAACAGCCTTCTCTCAGCGGTGC
TGCTTCCGTGCTGAACAAATTCGCAATTTATCTAACTCTTTTGAGATTCTTGGAATATAGCATATCTGATGAAA
TAACCAAGGCAGTTGAAGATGACTTTGTGGAATGCGGAAGAACGACCCTCAGAGCATCACTGCTGATGATCTTC
ACCAGCTGCTCGTGGTGGCTCGGTGTCTGTCTCTCAGTGCTGGTCAGACAACGCTGTCAAGAGAACGATGGCTGA
GAGCAAAGCAGCTAGAGTCTTTAAGAAGAACGAGGCTTCAGCAGCAAAAATGTGTGAATGGAAATGAACTTTAA
GATGTAATACCTATGAAGAGTAATGGGCAAACTGTAGCCACATAATTGTAAAATTCAGATATTCATTTATACCAC
ATTGTTTTATAGGTAATTTCTATCACAACCAGTGACATTTCCCTGAAATCAAGCCTGGTAACACCTGATGTTTAT
ATGATATTCAGTAAGGACTTTTACCTTACTGATTTTCATGGAGCTTTTGAAGTTTGTGTTTATAATAATTATATAAA
TTAGTAATGATGTAAAAAAGTATTTGATATTAAAAAGTTAATATTGATAATGTTGCTGATTGTACCATTTCCCT
AGCTTCAGCTGAGTCATAGGCCAGACTGTTGAAATGCTGAAATGAAGAAGGTTGTTGCAGTTTCAAAGTCAGAGG
AATCGTGCTTCGGATTTCTTATGTTTTCTAGTTCTCTGTTTTTCCAGTTCACAGTGGGTTGGGGTGCATTTCAGTA
GTCCATCTTTGGGGAACGGAGGCGTACTTGCCATTGATTACATGACTACATGAAATTCGTACTGTCAATTTCCC
AGATGTTTGGCCACAGAACTTTTTCCCACTTAACATTTGTTAACAGCCTGCAAACTAACTTGTACATGGCAG
TGGTTCACAGACTTTTGTATTTTATGGACCGGTAGTAATATTTCCAAAAATCTGGGGTACTATAAGGTTGCCAAT
TTACCTTGCCAAGTAATCCGAATAAATCACTGTATTATCACCATTTTTTTTCATAAAAGGAAAGGACAATCTATCT
CTGAATAAGAGGAGTCCTTTAAACGGAATGAATGTGGCTTTTGGGGGCAAAAGAAACCAAGACACTACATTGTCT
TTATTTTCTCCTATCCCAGTGCATTTGAGAACCATGCATAAGGGAATGCTGTGCTACAAAGCTGTGCCAAATAT
GAAACAAAATAGGAACTTAAAAAGCAATACCCCTTTAGAAAGTTTTTATTTTCTTAAATGTCATTGAGTTGC
TTTGATTCTATTGGATTTTTTGGCATTTTTTATGGGATCATCAGTTGGTTCCAAGTATGTTAGATCAGCTAACATC
TGCTACTCCAGTAACAGCCTCGTACAACCTGCAGGTAGGTTTTCTCCAGACCAATTAGTTTTAATAGAGCAAACTA
ACAACAGACTGTAGTAGCATGGTTATGGCAACCAGAATCTTCAGAAAGGTTAGGACATTACTTTTTAAGCTGTCA
GTGGTATCAAATAACTTACCTAGTTGGAGGCAGATAAAGGATCCCTTACGTTTTTCTATAAGGCCTAAATTGA
AATTGTTAACCAAGGAAACAGGTCAGCCTTGAAAAATCAAGGAATTCATTGTACCTAATAACTGAAGTAAAAAT
AACTAGTTGTTCAACTTTTTCTAACTCAAATCTATTTTTATAAACAAATGTAAATAATGTTTATATTAGAGTTG
AACTGGTTTTCATTTTTATAACTGGTAGACTAGACCTTCCCTTAACTTTTAGAAATAAAATGAAGGCTTCACTGG

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FIGURE 1160B

ATTTGTGAGGATAAAATACATTTTCTTTAATTGTCCTAGAGCAAAGTACATTAGTCACCATGTGTTTTTTGTGCC
AATGTAACTTGTAATTTACCAAAGAAAAATACATACATTGCTTGGTCTTGCAGAAAAGTTCCCTTGAAAGAACCT
TTCCAATAAATAAAACGTCCCAAATTAGCAGTACCTTGGGCTGTTTTTCATGAGTAAGAAGATTCACCATCCCAT
GTGATCTGTGTGGAAAAAGACCATGTCCTCTTGGTGGGAAGACATGAGAGAGCTGAACTGAAGTGGAGGAGGTGGT
GCAAGAGGGACCTTCCTGCTCAAGGCCCGCCAGGCAGCGGAATAGAGTGCAGTGCTTGGCTGCAGAAACCCTTT
GTCCCTCACCTATATATACACGGACAGTCAAGTTTGTGCTCTAACGTAAGGCACAGCGTTAATCCTGTATGGCC
AGGAAACTGAGTAGACTCCTGTGTAACCCTGTTTGGAACTTTGCCTTCTTAAATGATTTTTC

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FIGURE 1161

MPCGEDWLSHPLGIVQGFFAQNGVNPDWEEKVIEYFKEKLENNAPKWVPSLNEVPLHYLKPN SFVKFRMIQDM
FDPEFYMGVYETVNQNTKAHVLHFGKYRDVAECGPQQE LD LNSPRNTTLERQTFYCVPVPGESTWVKEAYVNANQ
ARVSPSTSYTPSRHKRSYEDDDDDMDLQPNKQKDQHAGARQAGSVGGLQWCGEPKRLETEASTGQQ LNSLNLSSPF
DLNFPLPGEGKPACLVKVYEDWDCFKVNDILELYGILSVDPVLSILNNDERDASALLDPMECTDTAE EQRVHSPP
ASLVPRIHVILAQKLQHINPLLPACLNKEESKTCKFVSSFMSELSPVRAELLGFLTHALLGDSLAAEYLILHLIS
TVYTRRDVLP LGKFTVNLSGCPRNSTFTEHLYRIIQHLVPASFRLQMTIENMNHLKFIPHKDY TANRLVSGLLQL
PSNTSLVIDETLLEQGQLDTPGVHNV TALS NLITWQKVDYDFS YHQMEFPCNINVFITSEGRSLLPADCQIHLQP
QLIPPNMEEYMNSLLSAVLPSVLNKFRIYLTLLRFLEYSISDEITKAVEDDFVEMRKNDPQSITADDLHQLLVVA
RCLSLSAGQTTL SRERWLRAKQLES LRRLRLQQKCVNGNEL

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FIGURE 1162

TGTTCTTGAGCCCAGCTTCTTCTCGTCTCCACCCCCAGCTTCCCGGCATTGGAAGAAGGGACCGTCCTCTTCCTT
GTCTTGGCCACCCAAATCCTGGTATCGAAAGGGTTGAACGGACCGGAAGTGTGCAGCAGCGACGGGTCCCCAGCT
AATCGACGCCGGAAGTAGCAATTACTAGACAAGCATTCCGCCGCCGGCTTCGCTATGGCGGCAATCCCCCAGAT
TCCTGGCAGCCACCCAACGTTTACTTGAGAGCCAGCATGGGAATCATTGTGCTGGAGCTGTACTGGAAGCATGCT
CCAAAGACCTGTAAGAACTTTGCTGAGTTGGCTCGTCGAGGTTACTACAATGGCACAAAATTCCACAGAATTATC
AAAGACTTCATGATCCAAGGAGGTGACCCAACAGGGACAGGTCGAGGTGGTGCATCTATCTATGGCAAACAGTTT
GAAGATGAACTTCATCCAGACTTGAAATTCACGGGGGGCTGGAATTCTCGCAATGGCCAATGCGGGGCCAGATACC
AATGGCAGCCAGTTCTTTGTGACCCTCGCCCCACCCAGTGGCTTGACGGCAAACACACCATTTTTGGCCGAGTG
TGTCAGGGCATAGGAATGGTGAATCGCGTGGGAATGGTAGAAACAACTCCCAGGACCGCCCTGTGGACGACGTG
AAGATCATTAAAGGCATACCCTTCTGGGTAGACTTGCTACCCTCTTGAGCAGCTCTTCTGAGATGGCCCCAGTGAA
CCAGCTTCTAGATGACATAGAATGACATGTAATGCTAAATTTTCAATTTGGCTTTGCAAGTCATGAAGCTTAGGAG
GCCTGGCATCTTGGGTGAGTTAGAGATGGAAGTACATTTTAATAGGATGCTTCTTTTCTCTTCCCCCAGTGCCTA
GGTTGCCAGAGCATTTCACAAAATGCCCTGTTTATCAATAGGTGACTACTTACTACACATGAACCATAATGCTG
CTTCTTGTGCATGTCTGCTCTGATATACGTGGAACAATGTAGCAGCCACTGTCATTTCTCAGTGGTTTTGCCTAA
CCAAACTTCTTCTAAGGAGATTTATATTCTGGCCTACACAGCAGTCCTTGATGGCTGACAGCCACAGAATTCCA
AACCAAGTAGTGTCTGTGTCAGCCCTCTTAACTCTGTGCACGCCCTATTTTCAGTCTTTTACATTTGTTCTTCTAGGG
AATGTATGCATCTCTATATATATTTTCCCTCTCAAAAACCAGAACATCAACAGTGCTGTTTCTGACACTTCAGACA
TCCCACGCAAAGCCACATTGAATTTTTGCCAAATGAAAAACACATCCAACAATCAAGTTTCTAAGAAGGTGTCAA
GTGGGGAATAATAATAATGTATAATAATCAAGAAATTAGTTTATTAAAAGGAAGCAGAAGCATTGACCATTTTTT
CCCAGAGAAGAGGAGAAATCTGTAGTGAGCAAAGGACAGACCATGAATCCTCCTTGAGAAGTAGTACTCTCAGAA
AGGAGAAGCGCCACTCAAGTTCTTTTAACCCAAGACTTTAGAGAAATTAGGTCCAAGATTTTTATATGTTTCAATT
GTTTATGTATAAAAAATACTTTCTGGATTTTGTGGGGAGGAGCAGGAGAGGAAGGAAGTTAATACCTATGTAATA
CATAGAACTTCCACAATAAAATGCCATTGATGTTGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1163

MAAIPDSWQPPNVYLETSMGIIVLELYWKHAPKTCKNFAELARRGYNGTKFHRI IKDFMIQGGDPTGTGRGGA
SIYGKQFEDELHPDLKFTGAGILAMANAGPDTNGSQFFVTLAPTQWLDGKHTIFGRVCQGIGMVNRVGMVETNSQ
DRPVDDVKI IKAYPSG

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FIGURE 1164

AATAACCTGGAGCCGGCGGCGTAGGTTGGCTCTTTAGGGCTTCACCCCGAAGCTCCACCTTCGCTCCCGTCTTTC
TGGAACACCGCTTTGATCTCGGCGGTGCGGGACAGGTACCTCCCGGTGCTGCGGGTGCCCTGGATCCAGTCGG
CTGCACCAGGCGAGCGAGACCCCTTCCCTGGTGGAGGCTCAGAGTTCCGGCAGGGTGCATCCGGCCTGTGTGTGGC
GCGAGGCAGGGAAGCCGGTACCCGGGTCTGGCCCCAGCGCTGACGTTTTCTCTCCCTTTCTTCTCTCTTCGCG
GTTGCGGCGTGCAGACGCTAGTGTGAGCCCCCATGGCAGATACGACCCCGAGCGGCCCCCAAGGGGCGGGCGCT
GTGCAATTCATGATGACCAATAAACTGGACACGGCAATGTGGCTTTCTCGTTGTTTACAGTTTACTGCTCTGCT
CTGTTTGTCTGCCTCTTCTTGGGTGTCATGAAGCAGCAAGCTTTTACCAACGTGCTTTGCTGGCAATGCTCTT
ACCAGTGTCTGAGGCTGCATCAAAGATTACCACACTTCCAGTTAAGCAGAGCATTCTGGCCCAGGCTTTGTTA
GAGGACAGCTGCCACTACCTGTTGTATTCACTCATCTTTGTAAATTCCTATCCAGTTACAATGAGTATCTTCCCA
GTCTTGTTATTCTCTTTGCTTCATGCTGCCACATATACGAAAAAGGTCCTTGACGCAAGGGGCTCAAAATAGTTTA
CCTCTGCTGAGATCTGTCTTGGACAAAATTAAGTGCTAATCAACAAAATATTCTGAAATTCATTGCTTGCAATGAA
ATATTCTGATGCCTGCGACAGTTTTTATGCTTTTTAGTGGTCAAGGAAGTTTGCTCCAACCTTTTATATACTAT
AGATTTCTTACCCTTCGATATTCTGCTCTGAAGAAACCCATATTGTGCGACCTTATTTAATGAAGTGAAGATTGTT
GTTGAACACATAATAATGAAACCTGCTTGCCCACTGTTTGTGAGAAGACTTTGTCTCCAGAGCATTGCCTTTATA
AGCAGATTGGCACCAACAGTTCCATAGTTTAAACATCTAGTTAAGCTACAAATATAGTATAAGCATTATTAGCAGC
TGGTACTTCTGCTAGGGGTTGTAAATTCAGGTGTTACACTGACCTCAATCCAATTTACATAATTTACATAAATG
CATCTCGGTGGAAAAATAATCATTCTTGGCATGTTAAATCAAGCTTAAAAAGTTTTGAGAAAATTTACTGTG
CTGTGTTGCTAATGGTTAAAGAAGTCTGTATCTAGTGATAAATATACCAGTTTTTTTAAAAAGATGCTGTTGTGC
CTATATCATGAAGTACATTAATTTCTCATGTAAAAAAATAGCTCTAAAATTTGTTTCAACCTAATTGGTAACCT
GAGTTTATATCTGGCATGAATTCATTATGGTGATACACATATGTGAATTCAGTACATTTTGAGACAGTATTCTAC
CATTAGTAATTTTGGTTAATGATTTTAACACTTCTCAGTGTATTTAATTTCAAATTTGTTTTTAATTGGTTTTT
ATGCTGCTTTGTTAGGACAGATGTGTTTTGAATGTACCATTATAAGAAGAATTCTATGTATCTTAAACTATGATC
TTCTAAAATTTTATTTCCGTAAGTACTTCTGTGGCCTTGAGTATTTTTTAAAAGGCTCAACTGTAAGCCTCTTAG
CCAGTTGGATAAATATTTGGGGTCACCTAGCCATTGAAAGCAGAAAGCAGTAGTGACACAGCTTTCCCTTCAAAG
AGCCATTGAGAAACATTTCTCAAACAGGAAATCCTTCTTTTACTAATGTGGACATATAGATTATTCGTATTATAG
TTGTAGAACTACCTAGTTTCAGAACTCTTGACTGCCAGTTTTCTTGGTTTCTTAGGCTTGAATTTTCATAGACAAT
TGCAACAGTTTAGATGCCTTTTGAAAGGAATGTAATGAAGATTCAGCATCTGACTATATGTGTGTCTATCCTGAA
ATAATAATGGAGAGTATACTGTAGATTACATGTTTACCCATCAAATCTGACTTAAAAGGTTAAATGGAAGGTTTT
ATAGGTAAGGTAATTGATTGGGAATGGGGTAGGGGAGGAGTTGTGGGGGAATAATGTGCATTTTCAGTCTCAACG
CATAGATAAATTTAGGGGAATTGGATGCATTATTCAACTTTGATTGGGTTGTAAAATGTGTTAAATCCCTGTTCA
TTGAACCTCCCATCAACTCTTATGAAATTCATGCTGATCTTCATTACCGTTGCATGATTGGAATGTTTAAACAT
TGTACAGTTTTAGTATAGAGAAATGTAATGGTTTTTGTGACCAGTTTCTGTCTGCATGTAATTTGGATTTCTCAA
ATACATTCATTAGTAATTTATCAGTAACATTAGTTTTATTTTTGTTTCACTCTCCTTATCTATAAAAAAGGGATATT
CTTAGGATAAATACATGAAAAATTATACTTGATAGCTTAACTATAATCAGCTATTTTTGTATTTTGTAAATATT
GTCCACTAAGCTGGAGAAGCAGCCTCATACAGTTGATTTTGTGTATGTGGCTAGTCTTATTGTCACTATGTAAGT
AATCCAATGGTTTTAGAACTAAACTTTCTAGAGCAATAAAATGACTATAATGTTAAGT

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FIGURE 1165

MADTTPSGPQGAGAVQFMMTNKLDTAMWLSRLFTVYCSALFVLPLLGLHEAASFYQRALLANALTSALRLHQRLP
HFQLSRAFLAQALLED SCHYLLYSLIFVNSYPVTMSIFPVLLFSLHAATYTKKVL DARGSNSLP LLRSVLDKLS
ANQQNILKFIACNEIFLMPATVFMLFSGQGSLLQPFIIYRFLTLRYSSRRNPYCRTL FNELRIVVEHIIMKPACP
LFVRRCLQSIAFISRLAPTVP

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FIGURE 1166

GCACGAGCCCCGGGCTGCCGGCGGGGCGCCGCGGCACGTCCACAGGCTGGGTGCGGAGGTGGCGATCGCTGAGA
GGCAGGAGGGCCGAGGCGGGCCTGGGAGGCGGCCCGGAGGTGGGGCGCCGCTGGGGCCGGCCCGCACGGGCTTCA
TCTGAGGGCGCACGGCCCGGACCGAGCGTGCGGACTGGCCTCCCAAGCGTGGGGCGACAAGCTGCCGGAGCTGC
AATGGGCGCGGCTGGGGATTCTTGTTTGGCCTCCTGGGCGCCGIGTGCTGCTCAGCTCGGGCCACGGAGAGGA
GCAGCCCCCGGAGACAGCGGCACAGAGGTGCTTCTGCCAGGTTAGTGGTTACTTGGATGATTGTACCTGTGATGT
TGAAACCATTGATAGATTTAATAACTACAGGCTTTTCCCAAGACTACAAAACTTCTTGAAAGTGACTACTTTAG
GTATTACAAGGTAAACCTGAAGAGGCCGTGTCTTTCTGGAATGACATCAGCCAGTGTGGAAGAAGGGACTGTGC
TGTCAAACCATGTCAATCTGATGAAGTTCCTGATGGAATTAATCTGCGAGCTACAAGTATTCTGAAGAAGCCAA
TAATCTCATTGAAGAATGTGAACAAGCTGAACGACTTGGAGCAGTGGATGAATCTCTGAGTGAGGAAAACACAGAA
GGCTGTTCTTCAGTGGACCAAGCATGATGATTCTTCAGATAACTTCTGTGAAGCTGATGACATTCAGTCCCCCTGA
AGCTGAATATGTAGATTTGCTTCTTAATCCTGAGCGCTACACTGGTTACAAGGGACCAGATGCTTGGAAAATATG
GAATGTCATCTACGAAGAAAACCTGTTTTAAGCCACAGACAATTAAAAGACCTTTAAATCCTTTGGCTTCTGGTCA
AGGGACAAGTGAAGAGAACACTTTTTACAGTTGGCTAGAAGGTCTCTGTGTAGAAAAAAGAGCATTCTACAGACT
TATATCTGGCCTACATGCAAGCATTAAATGTGCATTGAGTGCAAGATATCTTTTACAAGAGACCTGGTTAGAAAA
GAAATGGGGACACAACATTACAGAATTTCAACAGCGATTGATGGAATTTTGAAGTGAAGGAGAAGGTCCAAGAAG
GCTTAAGAACCTTGATTTTCTCTACTTAATAGAATAAGGGCTTTATCCAAAGTGTTACCATTCTTCGAGCGCCC
AGATTTTCAACTCTTTACTGGAAATAAAATTCAGGATGAGGAAAACAAAATGTTACTTCTGGAAATACTTCATGA
AATCAAGTCATTTCTTTGCAATTTTGTGAGAAATTCATTTTTTGCTGGGGATAAAAAAGAAGCACACAACTAAA
GGAGGACTTTCGACTGCATTTTAGAAATATTTCAAGAATTATGGATTGTGTTGGTTGTTTTAAATGTCGTCTGTG
GGGAAAGCTTCAGACTCAGGGTTTGGGCACTGCTCTGAAGATCTTATTTTCTGAGAAATTGATAGCAAATATGCC
AGAAAGTGGACCTAGTTATGAATTCATCTAACCAGACAAGAAATAGTATCATTATTCAACGCATTTGGAAGAAT
TTCTACAAGTGTGAAAGAATTAGAAAACTTCAGGAACCTGTTACAGAATATTCATT**TA**AGAAAACAAGCTGATAT
GTGCCTGTTTCTGGACAATGGAGGCGAAAAGAGTGGAATTTCAATTCAAAGGCATAATAGCAATGACAGCTCTTAAGC
CAAACATTTTATATAAAGTTGCTTTTGTAAAGGAGAATTATATTGTTTTAAGTAAACACATTTTTAAAAATTGTG
TTAAGTCTATGTATAATACTACTGTGAGTAAAGTAATACTTTAATAATGTGGTACAAATTTTAAAGTTTAATAT
TGAATAAAAGGAGGATTATCAAATTCATATATGATAAAAGTGAATGTTCTAAGTCTCTCAAAGTAGCGTTTTATG
TAATAATATGTAATATAAATAAACTATGGTAAATGTGACAAGCATTTAATAGGAAAATGCTAAGGAGGCCTCAT
AAATGACCCATAATTACCAACGTAGAATTTTTCAGTACATTTAGGGTTGCTGGATTTAGCAAATAAAAAATAAGA
TTGCCCAGTTAGATTTGAATTTTCAAGATAAACAATTAGTTTTTTAATATTTTACATGGAATATTTGGAAAATACTT
ATACTAAAAAATTATTTGTTTGAAATTCACATTTAACTGGGAGTCTTGATTTTTATCTGGCAATCCTAAAAATACA
TTGGTATGAAACAAATCACTTTTAGAAGTATATTGCTATTTTGATTGGGTGTTTTTGTGTGTAGAAACGTACAA
TAACAACCTCAAAGGCACAGGAGATTTCTAAACATTGTGAAAAGTTGAATAGATTATATATTTATTCTCATAATAC
TTTCACTAATACTAAATAAAATTTGGGGAACACTTTTTATTTTTATATAATTTCCAATTTACAGAAAAGTTTCAA
AAATAGTACAAAGAGCTCTCTTACCCAGATTCATAATTGTTTCATACGTGCTTTATCTTTTATGCTTTCTCTGTA
CACACACACACACACACAAATTTTCTCAATCATTGAAAGTCAGTTATAGGCATCATGCCCTTAAACCTTAA
ATACTTCAGTGTGTAATACTGAATAATTACTAAAAATGATTTTCTCAGAAAAAAAACCTCCACAATTCTGGAAC
TATAATACTGTAAGCCTTAGAATAAATAACTTTCAAGTTCCAATCTAAAGTTCTTTTTGAGTTTTGTTGCCCCG
TTTTATGCTTGATGTGTATAGTAATAGGGTAGGCTATTTATTTTATTAATAATTTTTTTTAGAGACAAGGTTTTGC
TGTGTTGCCCAAGCTGGAACCTGAACGACTGGGCTGAAGTGATCTTCCACCTCAGCCTCCCAAGTAGCTGGGAA
TACAGGTGTCTGCCACCATAACCCAGTTTCATTTTTGTTTTTATACCCGAAGTTCAATTTCTTTGTCTCCCTAAA
ACTGAACGTGAATTTTGGGAGGTTTTTCAATAGTGGAAGCTCTTCATTTATAAAGCTATTTGAAGGGGTTTAGGAA
TTTATATCACATGGTAATTGTAGAGAAAAAGAAGCTATATACCTCAAAATCGTGCCCTCTTTACATATGCTTTAT
CAGGTATAACATGTTGAATGTCACATTAGTAGTAAAGTGGGGTTTTATTTATATAGTGGTTAAGAAATGTCAGTT
TACACTGCTGTATACTTCTTCTTCTGTGTCCCTAAGGCCCTGGTACAGTGCCAAGCACATACTTGGTATCCAATAA
ATATTTGTTGGATGAAAAA

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FIGURE 1167

MGRGWGFLFGLLGAVWLLSSGHGEEQPPETAARCFQVSGYLDDCTCDVETIDRFNNYRLFPRLOKLLESDYFR
YYKVNLRPCPFWNDISQCGRDCAVKPCQSDEVDPDGIKSASYKYSEEANNLIEECEQAERLGAVDESLSEETQK
AVLQWTKHDDSSDNFCEADDIQSPEAEYVDLLLNPERYTGKGPDAWKIWNVIYEENCFKPQTIKRPLNPLASGQ
GTSEENTFYSWLEGLCVEKRAFYRLISGLHASINVHLSARYLLQETWLEKKWGHNITEFQQRFDGILTEGEGPRR
LKNLYFLYLIELRALSKVLPFFERPDLFTGNKIQDEENKMLLLEILHEIKSFPLHFDENSFFAGDKKEAHKLK
EDFRLHFRNISRIMDCVGCFKRLWGKLQTQGLGTALKILFSEKLIANMPESGPSYEFHLTRQEIVSLFNAFGRI
STSVKELENFRNLLQNIH

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FIGURE 1168A

CGATAACGATTGTGTTGTGAGAGGCGCAAGCTGCGATTCTGCTGAACTTGGAGGCATTTCTACGACTTTTCTC
TCAGCTGAGGCTTTTCTCCGACCTGATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCTTGAGA
AATGGATGGTCTTCACAATACCTCTTCAATCCCTTCTGACTGGTTATCAGTGCAGTGGTAATGATGAACACACT
TCTTATGGAGAAACAGGAGTCCCAGTTCCTCCTTTTGGATGTACCTTCTCTTCTGCTCCCAATATGGAACATGTA
CTAGCAGTTGCCAATGAAGAAGGCTTTGTTGATTGTATAACACAGAATCACAAAGTTTCAGAAAGAAGTGCTTC
AAAGAATGGATGGCTCACTGGAATGCCGTCTTTGACCTGGCCTGGGTTCCTGGTGAACCTTAACTTGTTCACGCA
GCAGGTGATCAAACAGCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCATCAATGC
AGCCTCAAGTCAGTTGCCTTTTCTAAGTTTGAGAAAGCTGTATTCTGTACGGGTGGAAGAGATGGCAACATTATG
GTCTGGGATACCAGGTGCAACAAAAAGATGGGTTTTATAGGCAAGTGAATCAAATCAGTGGAGCTCACAATACC
TCAGACAAGCAAACCCCTTCAAAACCCAAGAAGAAACAGAATTCAAAAGGACTTGCTCCTTCTGTGGATTTCCAG
CAAAGTGTTACTGTGGTCTCTTTTCAAGACGAGAATACCTTAGTCTCAGCAGGAGCTGTGGATGGGATAATCAA
GTATGGGATTTACGTAAGAATTATACTGCTTATCGACAAGAACCATAGCATCCAAGTCTTTCTGTACCCAGGT
AGCAGCACTCGAAACTTGGATATTCAAGTCTGATTTTGGATTCCACTGGCTCTACTTTATTTGCTAATTGCACA
GACGATAACATCTACATGTTTAAATATGACTGGGTTGAAGACTTCTCCAGTGGCTATTTTCAATGGACACCAGAAC
TCTACCTTTTATGTAAAATCCAGCCTTAGTCCAGATGACCAGTTTTTATGTCAGTGGCTCAAGTGATGAAGCTGCC
TACATATGGAAGGTCTCCACACCCTGGCAACCTCCTACTGTGCTCCTGGGTCAATTCTCAAGAGGTACAGTCTGTG
TGCTGGTGTCCATCTGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACACTAAAAATCTGGCGCTTGAAT
AGAGGCTTAGAGGAGAAACCAGGAGGTGATAAACTTCCACGGTGGGTGGGCTCTCAGAAGAAAAAGAGTCA
AGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCCTGCCAAAGCCCCAGGGTAAAGTGCAATCCATCC
AATTCTTCCCCGTATCCGCAGCTTGTGCCCCAAGCTGTGCTGGAGACCTCCCTCTTCTTCAAATACTCCTACG
TTCTCTATTAAACCTCTCCTGCCAAGGCCCGTCTCCCATCAACAGAAGAGGCTCTGTCTCCTCCGTCTCTCCC
AAGCCACCTTCATCTTTCAAGATGTCGATTAGAACTGGGTGACCCGAACACCTTCCTCATCACCAACCATCACT
CCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATTCTGTGAGCCAGAAGTCATCCCAAGCA
GAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAGACTCAAGCTGTCTGGAGAGTGTGAAACAAAAG
TGTGTGAAGAGTTGTAAGTGTGTGACTGAGCTTGATGGCCAAGTTGAAAATCTTCATTTGGATCTGTGCTGCCTT
GCTGGTAACCAGGAAGACCTTAGTAAGGACTCTCTAGGTCTTACCAATCAAGCAAAATTGAAGGAGCTGGTACC
AGTATCTCAGAGCCTCCGTCTCCTATCAGTCCGTATGCTTCAGAAAGCTGTGGAACGCTACCTCTTCTCTTGAGA
CCTTGTGGAGAAGGGTCTGAAATGGTAGGCAAAAGAGAATAGTTCCCCAGAGAATAAAAACTGGTTGTTGGCCATG
GCAGCCAAACGGAAGGCTGAGAATCCATCTCCACGAAGTCCGTATCCAGACACCCAATTCCAGGAGACAGAGC
GGAAAGACATTGCCAAGCCCGGTCAACATCACGCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAG
TCCCAGGAGGACTTCTGTGGTCTGAACTCAACAGAATTATAGATTCTAATCTGAGTGAGTTACTGAGCTTTG
GTCCACTAAAACAAGCTGAGCTTTGGTCCACTAAAACAAGATGAAAAATACAAGAGTGACTCTATAACTCTGGTC
TTTAAGAAAGCTGCCTTTTCAATTTTATAGACAAAATCTTTTCAACGCTGAAATGTACCTAATCTGGTTCTACTACC
ATAATGTATATGCAGCTTCCCAGGATGAATGCTGTGTTTAAATTTTATAAAGTAAATTTGTCACTCTAGCATTT
TGAATGAATAGTCTTCACTTTTTTAAATTATTTCATCTTCTTATAATAATGACATCCAGTTTATGGAGGCAAAAA
ACAAGTTTCTTGTATCCTGAAACTTTCTATGCTCAGTGGAAAGTATCTGCCAGCCACAGCATGAGGCCTGTGAA
GGCTGACTGAGAAATCCTCTGCTGAAGACCCCTGGTTCTGTTCTGCCCTCCAACATGTATAATTTTATTTGAAATA
CATAATCTTTTCACTATGCTTTTGTGGGGTTTTTTTTAAGTATGTGTAAAAATGTGATGCTCAGATAAGTACATT
TATATCAGTTTCACTGTAAATGCAGTCTCTTGAGTTAAAGTCATCTTTATTTTAAATGCAGTGATAAATGTCAA
CTCTTCGGAGAACTAGGAGAACAAACAGAAAGCTGTGTTTGTCTTTTTTCTCTCAAATATATCTCCCGTATG
AGATTTTCAAGTCCCATGTTTTTACCAAGCAATCTGCTATGTCAGCCAACCAACATCACTTTTCTACAGGAGGTT
ATGATTTTGGCATTACTAGAGGAAGATGTTTTATGAAATCAATTTGGGGTTTGAATTCAGGTGCAGTCATCAG
TTCTTTAGGGGCTGCAATGTTTTAAAAAAATAAGTCATCAGATTTTAAAGAAAAAGTGATGATTTCTTATTGAT
ATTTTGTAAACAGAATATAGCTCTTAACTGAAAATCCAGAACCAAGATAAATCTTGAGTTTCTTTTTCATGTA
CATAAAAAGCAATAGCCTTTTATGATAGATAGCCCTGAGCCAAAAGTAATAGAATTTTCTCTAGATATTTAATA
CAGAGAGTGTATAGACTGACTCTAAGTTAATAATGTGCAAAATATCTTAAACATCCCTCCCTTATTCAACAATT
ATGTATCAGTGATCTTGAACATTGTTTTATATTTTACCTTTGTAACCTCATGGAAAGAGGCTTTACATACTT
TCTATGTACTATTTACTTAGAAGGGAGCCCCCTTCCAGTCATGAAACTTCATTTGTTTTATCCATATCCCTGAGG

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FIGURE 1168B

ACTGTGTAGACTTTATGTCAGTTCTGTGTAGACTTTATGTCAGTTTTTGTTCATTATTTGAAAACTATTCTGACA
ACTTTTTAATTCCTTTGATCTTATAAGTTAAAGCTGTAACAAGCTGAAATTGCATGGATCAAGTAAGCATAGTTTT
ATCCAGGGAGAAAAATAAAAGGAAGCCATAGAATTGCTCTGGTCAAAACCAAGCACACCATAGCCTTAAGTGAAT
ATTTAGGAAATCTGCCTAATCTGCTTATATTTGGTGTTTGTTTTTTGTACTGTTGGGCTTTGGGAAGATGTTATTT
ATGACCAATATCTGCCAGTAACGCTGTTTATCTCACTTGCTTTGAAAGCCAATGGGGGAAAAAATCCATGAAAA
AAAAAAGATTGATAAAGTAGATGATTTTGTGTATCCCTACCCATCTCCTGGCAGCCCTACTGAGTGAAATTGG
GATACATTTGGCTGTCAGAAATTATACCGAGTCTACTGGGTATAACATGTCTCACTTGGAAGCTAGTACTTTTA
AATGGGTGCCAAAGGTCAACTGTAATGAGATAATTATCCCTGCCTGTGTCCATGTCAGACTTTGAGCTGATCCTG
AATAATAAAGCCTTTTACCTT

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FIGURE 1169

MLFNSVLRQPQLGVLRNGWSSQYPLQSLITGYQCSGNDHTSYGETGVPVPPFGCTFSSAPNMEHVLAVANEEGF
VRLYNTEQSFRKKCFKEWMAHWNVFDLAWVPGELKLVTAAAGDQTAKFWDVKAGELIGTCKGHQCSLKSVAFSK
FEKAVFCTGGRDGNIMVWDTRCNKKDGFYRQVNQISGAHNTSDKQTPSKPKKKQNSKGLAPSVDFQQSVTVVLFQ
DENTLVSAGAVDGI IKVWDLRKNYTAYRQEP IASKSFLYPGSSTRKLGYSLLILDSTGSTLFANCTDDNIYMFNM
TGLKTSPVAIFNGHQNSTFYVKSSLSPDDQFLVSGSSDEAAYIWKVSTPWQPPTVLLGHSQEVTSVCWCPSDFTK
IATCSDDNTLKIWRLNRGLEEKPGGDKLSTVGWASQKKKESRPGLVTVTSSQSTPAKAPRVKCNPSNSSPSSAAC
APSCAGDLPLPSNTPFTFSIKTSPAKARSPINRRGSVSSVSPKPPSSFKMSIRNWVTRTPSSSPFITPPASET
KIMSPRKALIPVSQKSSQAEACSESRNRVKRRLDSSCLESVKQKCVKSCNCVTELDGQVENLHLDLCCLAGNQEDLSK
DSLGP TKSSKIEGAGTSISEPPSPISPYASESCGTLPLPLRPCGEGSEMVGKENS SPENKNWLLAMAAKRKAENP
SPRSPSSQTPNSRRQSGKTLPSVTTITPSSMRKICTYFHRKSQEDFCGPEHSTEL

[illegible]

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FIGURE 1171

GCGCTCCCGGAACGCGCGCACCGCAGACGGCGCGGATCGCAGGGAGCCGGTCCGCCGCCGGAACGGGAGCCTGGG
TGTGCGTGTGGAGTCCGGACTCGTGGGAGACGATCGCGATGAACACGGTGCTGTCGCGGGCGAACTCACTGTTCG
CCTTCTCGCTGAGCGTGATGGCGGCGCTCACCTTCGGCTGCTTCATCACCACCGCCTTCAAAGACAGGAGCGTCC
CGGTGCGGCTGCACGTCTCGCGGATCATGCTAAAAAATGTAGAAGATTTCACTGGACCTAGAGAAAAGAAGTGATC
TGGGATTTATCACATTTGATATAACTGCTGATCTAGAGAATATATTTGATTGGAATGTTAAGCAGTTGTTTCTTT
ATTTATCAGCAGAATATTCAACAAAAAATAATGCTCTGAACCAAGTTGTCCTATGGGACAAGATTGTTTTGAGAG
GTGATAATCCGAAGCTGCTGCTGAAAGATATGAAAACAAAATATTTTTTCTTTGACGATGGAAATGGTCTCAAGG
GAAACAGGAATGTCACCTTTGACCCTGTCTTGGAACGTCGTACCAAATGCTGGAATTCTACCTCTTGTGACAGGAT
CAGGACACGTATCTGTCCCATTTCCAGATACATATGAAATAACGAAGAGTTATTAAATTATTCTGAATTTGAAAC
AACATATTTTTTATACTTAATGAATTGTATCTCATTAATCTCTTCCCTTACATCTTCATGTATTGTTGGTTTGT
TTTGGTTTTGGGTTTTTTTTTTTTTTTTTTTGGTATAAGAATAACATCAAAGGCCTGTTTAAAGGGAAAGGTTA
ATGGGCTACTTAATATTATGAACAAAAACAAAAAACAAGGCTGCCACAGTGGAATATTATCTTACAAGAATAAGA
ACTACATAAAACAGATTTGTAAAAAATACATATTTGAAGTATTCCCTGTATTTCATTATTCTTTATGGAATATA
AAGTAAGCATGAAAGGTAGTTAAACTTTTCAGGTGCCCTGTAGAGTCATAATACTGTATTTTATGCCTTGCATTC
ACGCAAATTCACATTGGATGTGATTTAAAAGTAGACATTCCTTTTTCTCTTTTAGGATATGTTTGATTACTGG
AAAATTAATATGGTTATTTGTTAGAAGTCTGGTTTATAAAAAAGCCAAAAGTGATGGAATTTATTCCATTTGTCT
TAGGAAGGCCATAATACTTGTTTTCTTACATGTGACTAGCAACTTTCTCCACTTAAAGACTAAATACCTCTTT
ATATGATGTAAATTATTCTAATTCATTTTAAAAATCTTTAGGTCAGCAAAATGTGTGCTTTCAGTGCTTTCTCTA
AAAACGTTCTTTATAGCTTTGTACTTTTTTTTTTAGCGTTGCCATTGAAAGTTAAATGTTTGCATGGTTTACC
CTCTGAGTTATGTTTCTTCTAGTGAGCATGCCTGCTGTCACTAAGTGAATTATTTACTACTTTTTGTAGGTCTAT
ATTTTAATAATTATTGGGATAATAATAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1172

MNTVLSRANSLFAFSLSVMAALTFGCFITTA FKDRSVPVRLHVSRI MLKNVE DFTGPRERSDLGFITFDITADLE
NIFDWNVKQLFLYL SAEYSTKNNALNQVVLWDKIVLRGDNPKLLLKDMKTKYFFDDGNGLKGNRNVTLTLSWNV
VPNAGILPLVTGSGHVSVPFPDTYEITKSY

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FIGURE 1173

TTTGCTAAAGCCACCATAAAGGAAATAGTTGTGTGGCCCATGTTTGAGGCCAGACATCTTTACTGGTTTTAAGGGGA
CCCCCTAAAGGAATTTTGTCTTTTGGTCCTCCTGGGACTGGTAAACTCTAATTGGCAAGTGCATTGCTAGTCAG
TCTGGGGCAACATTCTTTAGCATCTCTGCTTCATCCTTAACCTCTAAATGGGTAGGTGAGGGGGAGAAAATGGTC
CGTGCATTGTTTGTCTGTTGCAAGGTGTGAGCAACCAGCTGTGATATTTATTGACGAAATTGATTCTTTGTTATCT
CAACGGGGAGATGGTGAGCATGAATCTTCTAGAAGGATAAAAAACAGAATTTTTAGTTCAATTAGATGGAGCAACA
ACATCTTCTGAAGATCGTATCCTAGTGGTGGGAGCAACAAATCGGCCACAAGAAATTGATGAGGCTGCCCCGAGA
AGATTGGTGAAAAGGCTTTATATTCCCCTCCCAGAAGCTTCAGCCAGGAAACAGATAGTAATTAATCTAATGTCC
AAAGAGCAGTGTTGCCTCAGTGAAGAAGAAATTGAACAGATTGTACAGCAGTCTGATGCGTTTTTCAGGAGCAGAC
ATGACACAGCTTTGCAGGGAGGCTTCTCTTGGTCCTATTTCGCAGTTTACAACTGCTGACATTGCTACCATAACA
CCGGATCAAGTTCGACCCATAGCTTACATTGATTTTGAAAATGCTTTTAGAAGTGTGCGACCTAGTGTCTCTCCA
AAAGATTTAGAGCTTTATGAAAAGTGAACAAAACCTTTTGGTTGTGGAAAGTAAAGTGGGATACTTGGAATCAAGG
CATCTCTGTAGTACAGTCTTCTTTATTTTTTAGCATAGAAAGTTGGGGATGTGTTAATTGTATTTTTAAGAATAT
ATTCTAAGTTCTGTACTTCAAATAATAGCACAGATTTTACATCTGATTGACATAGTGTATGTTAATGTAAGTTTT
GCTTTCAGTGATTACCTGATACGTAAGCCTATTTGAACAAAGTGAGAATGAACTTTTGTTTCTAAGAAGTCITT
ATCTTGAAGCTATATAACATGAAAAGTGAGCTCAAATTTTTTTTAGTTGAAGATTACATATAAAGTTGTGTCTGA
TTAATATTCATCTTTTATTGAAGAAAGTGCCTTCTGATGGCCACATAATTCTTAATGTCAGCTAGTATAATGGTT
TACATTTGGACAAAGTATTGCTTAGTGTTATTTAAGTAGATTTAAGATCTCAAAGCTAAAGTGCCAATTTTTACT
TTCTTCAGCCAATTTGTTACCTCTTTTATGGTTTTAAATTTTTTATCAGGACTAACATTTTCAGAAATAGCAAGGT
GTGATCTAGTATTAGATTCACAGAACTGAAAGGTTAATTAAGAATGTTGGTTATTTTCACGGGAGCGTGTGATAT
TTAACATTAATATTTTATTTGACACTACAGCCTGTAATACTGCTCTCTTTCAAAAACAAGTTTTCAGATTTTTAT
AACAGACCCATTTTGTTTTATGAAACATGTTTACATACAGAAACATGAGAAAATAGAGATAAGTAAAAAGAATAAA
AGTCACTATTATCCTACCACTTTGCGGGACACACTATTAATATTTAAGCATAGATTCTTCCAGATGTTTTGTTTT
ATACAGCAGTAGGATTGTGTAATGTATTCTCTCTGTAGCCTATTCTTCAAAGCGTATCTTCACTTTCCATGTTA
ACATAAATGTCCTTTTATGATTGTCTAGGATTCATGGATGGATGGAATATAATTGAGTCATCTGGTAGAGCGCA
TATAGGACAGGACGCTAGGTTGTTTATCTTTTGTATTGTAAAGGAAGTATGTGGGATGCATTTGGTGATCTTT
TTAAAAAATGTATAAATTTCTTGAGTAATTCCTGGATTAAAGAATATGCACTTCTT

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FIGURE 1174

MLRPDIFTGLRGPPKGILLFGPPGTGKTLIGKCIASQSGATFFSISASSLTSKWVGECEKMVRALFAVARCQOPA
VIFIDEIDSLLSQRGDGEHESSRRIKTEFLVQLDGATTSSDRILVVGATNRPQEIDEAARRRLVKRLYIPLPEA
SARKQIVINLMSKEQCCLSEEEIEQIVQQSDAFSGADMTQLCREASLGPIRSLQTADIATITPDQVRPIAYIDFE
NAFRTVRPSVSPKDLELYENWNKTFGCGK

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FIGURE 1175

CACATATAATAATAGCAACTCCTGGTTCGACTGATTGACCACTTGAAACCTTTTCGTATTTTCCAAGTGCTGGCAAG
CGCTTCCTGCGCAGGCCGAGGCCGACCTGGAGTTTGTGACGCTGTGATGGTCTAGAGGCTGGAGATTCAAGATCTG
GGTGCCATCATTTTTCTGGTTCTGTTGATGACCCTCTTCCAGGTTACATACAGCTTACATCTTGCATCCTCAAGCG
TTTTTCTTATAAGGCTAAAAATTACAAAGCATATATCAATGAATCAGGAGGATCTAGATCCGGATAGTACTACA
GATGTGGGAGATGTTACAAATACTGAAGAAGAAGCTTATTAGAGAATGTGAAGAAATGTGGAAAAGATATGGAAGAA
TGTCAGAATAAATTATCACTTATTGGAAGTGAAGCACTCACCGATTCAAATGCTCAGCTATCATTGTTAATTATG
CAAGTAAAATGTTTAACCGCTGAAGTCAATGGCAGAAAAAACACCTGAAACAATTCCCTTGACTGAAGAC
GTTCTCATAACATTAGGAAAAGAAGAGTTCCAAAAGCTGAGACAAGATCTTGAAATGGTACTGTCCACTAAGGAG
TCAAAGAATGAAAAGTTAAAGGAAGACTTAGAAAGGGAACAACGGTGGTTGGATGAACAGCAACAGATAATGGAA
TCTCTTAATGTACTACACAGTGAATTGAAAAATAAGGTTGAAACATTTTCTGAATCAAGAACTTTAATGAAGT
AAAATAAAATGCTTAATATAAAAGAATATAAGGAGAACTCTTGAGTACCTTGGGCGAGTTTCTAGAAGACCAT
TTTCTCTGCCTGATAGAAGTGTTAAAAAGAAAAAGAAAAACATTCAAGAATCATCTGTAAACCTGATAACACTG
CATGAAATGTTAGAGATTCTTATAAATAGATTATTTGATGTTCCACATGATCCATATGTCAAAATTAGTGATTCC
TTTTGGCCACCTTATGTTGAGCTGCTGCTGCGTAATGGAATTGCCTTGAGACATCCAGAAGATCCAACCCGAATA
AGATTAGAAGCTTTCCATCAGTAAAAGGATGTTTTCTTTTTTTCACACAGTAAAAATTCTTATCATTCAAGGATAT
TGGAACCACAGGACTATTTGGATAAAAAACATTATTTGCAAATTAATGCGCATAGTACTTTTATTGCAAAATGGC
ATGTGCTGCCATCTATTATTCATTTTTAAATGGTCATTTCTTATTAGTGAGTGCTTTAGTGTTTTAACTATAT
GGATAAGAATGCAGGTAGATAATATTCTAGGCATAAAACATTTAATGTACCTTACCTCATGCAATATTCTTTGGA
TTCTTTGTTGATTTATGATATTGCTAATATAATATTTTCTTAAATATATAACAATATCTTTTATGCATTTGAGT
TCCAGCTGGTGCTTCTTTATATTTAGAAATTATAATGGGAAGGTCATTTAATTACAGATGGTTTTAAATTTAG
GTAATATCTGAGGTGGCATAATTTAAAAATATTTAGCAAATTTGTTTCATATATACTGTCTTATTTCTAGATTTG
TTTAAATTTGGAATATGAAAACTAATGGATAAAGCTAGCATAAAATTGATATTTTAGTTTGTATTATTAATATA
TCATGTTACCTTATATATTAATCTACTCTTGATTCTGCTAATTATTACCAACAAAATTGTATTATGACATTTTA
TTAATCCTCTGTGAATTTTCTGTAAATAAAATTATTTCTGAAAATCTCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1176

MNQEDLDPDSTTDVGDVTNTEEEELIRECEEMWKDMEECQNKLSLIGTETLTDSNAQLSLLIMQVKCLTAELSQWQ
KKTPEITPLTEDVLITLGKEEFQKLRQDLEMVLSTKESKNEKLKEDLEREQRWLDEQQQIMESLNVLHSELKNKV
ETFSESRIFNELKTKMLNIKEYKEKLLSTLGEFLEDHFPLPDRSVKKKKKNIQESSVNLITLHEMLEILINRLFD
VPHDPYVKISDSFWPPYVELLLRNGIALRHPEDPTRIRLEAFHQ

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FIGURE 1177

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTACAGCCCGTTCCCTCCC
GGAGCCCGGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCCTCACTGCGTT
TTTTTTTCCTTTTATCCAAAGAACGGGGCAGTTAGTACGCTTGCTTCTGTGCGCCGGTTGGGAGCGGGGTTGG
TGTGCGGAGTGTTTCGCCTTTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTCTTTCTTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGCCCGGTCCCTGACTAACGGCTTTCTGCCCTTCTCTGCCACCCCTGC
CCAAGTTCGCCCCCTGTGCCTTCGCCCCGTGTCCCGGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCACTCGCGTC
TCCGCAGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTCCGTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAAGGATGTCTGACACTTTATACTG
GAAGGGGTGGTGAACCTTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGCAATGCGAGATTCCATACACT
ACTACCCTGGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTTCACTGAACCCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCCATGAATAGTAATATGGGTACAGGTACATTTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTTACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACATAAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCCTCGGAGAGCCTTTAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACTTTTATTATTGTTA
ACTGTGAAAAGTACGTCTTTTATTGGGTTTTCTTTTATATTCTTGGTTTGTAAAGAAGATGGTTTGTTTTTATA
GCAAAACTGTAAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTCAATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTCT
TTGTATTCAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTTTGTGGCTCTCGGAATGATTGACTTCGTTTCACTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTGTGTATTACCAAAAAACAGATTCTTATCAGAATTTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAATTTAAACTGGGGCCTTGAATATTTATTTTTTGAACCTACCATGTTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAAATTGAATTCATATAGTAACATGCAGTCTGAAGTCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTAGAAATATAAAGTGGAA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCCTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTTAAACAAACCTACGTAATTTTTGCCCTTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACCTACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTTCTGAAAACCTCATAGCATTTGAAT
ACAAAAAGTTGTGCCAGATTGTTTGCCCTAATTCAGTGTGTTTAAACAAATATTTTCACTACACACTATGTATTAGG
CACTGTGTGGAAAGTGTAAAGGGGTAGACAAGATAACGAATAATCTCCACAAGTTTATTTGTGGTCTATAGTACT
TTTGTAACCTGGGGTTACAAAAATTATAGAAATTTTTTTTCTTTGTTTCATATGCATATTCATGATTATAATTTGGC
TTTGTGTTGTGATTAAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAGAAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTGAATTTTTTAAAAACCTACAAATTAGTATATGATTGTTTAA
TATAAGTAAGATAGGAGCAACACTTTAAATTATTTGTGGGAGAATACAGCATTAAGGTGATTTTAAAGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1178

MNRVNDPLIFIRDIKPLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSLGV

1296/1629
FIGURE 1179

CAGCCCACCTCTTGTCATCGTCACCTACAGGTATCTAAGCAATGGATCCAAGCCCTGGAGGTTGGTGAGAGCCATG
TATTACCCCTAGATGAAATTGGACAAGAGACC**ATG**ACCGTAACCCCTCCTCGATGCCAATCACTGTCTTGGTTCTG
TCATGTTTCTCTTTGAAGGATATTTTGGAAACCATCCTCTACACAGGTGATTTTCGATACACACCATCCATGCTAA
AGGAGCCAGCCCTGACACTGGGGAAACAGATCCATACTTTATACCTAGACAACACCAATTGCAATCCAGCCCTGG
TTCTTCCTTCCCGACAAGAAGCTGCCCCACCAGATTGTCCAGCTCATTGCGAAAACACCCACAACATAACATAAAGA
TTGGACTCTACAGCCTGGGAAAGGAATCACTGCTGGAGCAGCTGGCCCTGGAGTTTCAGACCTGGGTGGTATTGA
GTCCTCGGCGCCTGGAGTTGGTACAGCTACTGGGCCTGGCAGATGTGTTTCACAGTGGAGGAGAAGGCTGGCCGCA
TCCATGCAGTAGACCATATGGAGACCTGCCATTCCAACATGCTGCGTTGGAACCAGACCCACCCCTACGATTGCTA
TCCTTCCCAACAAGCCGAAAAATCCACAGCTCCCACCCTGATATCCACGTCATCCCTTACTCTGACCATTCTCTT
ACTCCGAGCTTCGTGCCTTTGTGCGCAGCACTGAAGCCTTGCCAGGTGGTGCCCATTTGTAAGTCGGCGGCCCTGTG
GAGGCTTTCAGGACAGTCTGAGCCCCAGGATCTCCGTGCCCTGATTCCGGA CTCTGTACAGCAATACATGAGTT
CTTCTCTAGAAAACCAAGCCTTCTCTGGCTGTTAGAAAGGAGGCTAAAGAGGCGGAGAACCCAAGGTGTTGTGT
TTGAATCCCCTGAGGAAAGTGCTGATCAATCTCAAGCTGACAGAGACTCAAAGAAGGCCAAGAAAGAGAACTTT
CTCCCTGGCCTGCGGACCTTGAAAAGCAGCCTTCCCACCATCCTTTGCGGATCAAGAAGCAGTTGTTCCAGATC
TCTATAGCAAAGAATGGAACAAGGCAGTGCCCTTCTGTGAGTCTCAAAAGAGGGTGACTATGTTGACGGCCCCAC
TGGGATTTTCAGTGCACCTTAAGGTCTACAGATGAGGAGTTTATTTCTCAAAAAACCAGGGAGGAAATTGTTTAG
GGTCCCCCTTGGTACCCATGGGAGATGATGATGGAGGTCCAGAAGCCACAGGGAATCAGAGTGCCTGGATGGGCC
ATGGTTCTCCCTGTCCACAGCAGCAAGGGCACCCCTCTTCTAGCTACTGAATTCAGGGGTCTAGCACTCAAAT
ATCTTCTGACTCCAGTGAACCTTTTCCAGGCAGGGTATTCTTCCAGGAGATTTGACCAGCAAGTGGAATAATACC
ATAAACCCCTGCT**GGA**AGACAGGAGAGTACAGAATGACAACATTGAGCCACACTGCAGTTTTGAAAGATAGTAAGTG
ATGGCTGGTGGGAAAGAGTTTGTGTTTTGGGGCCTACTTTTCTATCTTTACAAGACTCTTATGGGGCCACCCTGGA
GCAGCACTTCCCAAACTTGTTCACTGGGGTCCCTCGTGCCTATGGAATCCTTCTTTTTATAACTAAGTTTAAGAA
ATACTTTTTTTATAAAATCTTTGGAGTATGCGTGAGCAAATTAAGAGTTCTTTGAAGTCTACAGTAAGTTAATC
TGTTTAACCTTGTTTAACCCAGTATTTCTCAAACCTTTTGTGAACATGCAATCATCTTATGTGGGTACAGAAAGAG
GTAAAGAGTCTGAATCAAAAAGGACCAGGTTATTGCTGTTGCTGTTTTGTGGTGTGTCATGAGCCATTCTCCATGTC
CCCTTCTCCCTCTTCTCAGATCAAAATCCCTAGGGAGTTCTATTTTTAAATTAATGAAGTATGGCGCTGCATGCT
TCAATCCTGAACGTCAGTACTGCTGTGACCATCCAAATAATTTTCTGTCTCTGCCTCTGGGAGGGAACAGGA
AGCGATGAAGAGGTCTTGGAACAGTAGTGAAAATTCTACCTCTATGTCCTTCATGAGGATGTGCAGTATCCAGT
ATCACTGGGATCCATGTGGAACAGAGCCAGCTGGGGGGTTGGGCAGCTCTCTCCAAGGCAGTACCTAGAGCCAG
CTGAACAACAAGGCTTTGGGTGTGAAGGGACTCCCCAGCCTGGAGACCCTATTTGGCTGAAACAGTTACAAAATA
TCAAATGTGTTGTGATATTTCTCCAATTGTTACATAGCTGGGATATTTGTTGCTCCCTCACCCCTTGGAAT
ATGTAGGGAGCCAGTGACACAGCCTGTTGTTTTAGTATCCAAGGAAGAGACCAAGGAGCCAGCTGGCGGGAAG
GGGTGGGGTGTGTCAGTCTGCCCTGTCTTCTGCTCATAACCTGACAAAATGCCAACTAGTAAGCAGGATAGCT
GATACCACGGCTATGAGGGAGTAGGCTCCGAGAGGGCACAGACTTGTGGAGCTGGGCGTCTGGATCAAACTGCT
TTGGGATGGAACCTCGAGCCCTAGCAGTGAAGAAGATTCCATTTCTTGTCCAGGGGATTTAAAGAGTTTTCTGC
TTTGAGAGAGAAATAGAGAGTTTAGAAAAGCAATTGCTCTTGGGAAAGCTATACACAGCTCTGTTTTGTCAATGAC
CTTTGTTGTAAGTCTCCCAACGTCTATTAGGAGCCACAGCAGGTGAGGCATTTGGTGCAGCAGGAAACATGGGG
ACTGCCTAGGCTCGAATCTGTGGCACCTGAGCAATTACTTAAATTGTGGAGCCTAGTTCTCTCATCTGTAAGATG
GACTTGAGATTCTACCTCTCATGATTACTATGGAGATTGAATAATTGGTAAAATTCTCTAGCTCAGTGACTGC
CACAGGATGGGTCTTTCAGATTTTGGTTCTCTTTAGCTTCTGGTTCTTGAAAGAAATTGATCTGTATATAACATA
AGAACTTTGAAAGTC

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FIGURE 1180

MTVTLLDANHCPGSVMFLFEGYFGTILYTGDFRYTPSMLKEPALTLGKQIHTLYLDNTNCNPALVLP SRQEAAHQ
IVQLIRKHPQHNIKIGLYSLGKESLLEQLALEFQTWVVLSPRRLELVQLLGLADVFTVEEKAGRIHAVDHMETCH
SNMLRWNQTHPTTIAILPTSRKIHSSHPDIHVIPYSDHSSYSELRAFVAALKPCQVVPIVSRRPCGGFQDSLSPRI
SVPLIPDSVQQYMSSSRKPSLLWLLERRLKRPRTOGVVFESPEESADQSQADRDSKKAKKEKLSPPADLEKQP
SHHPLRIKKQLFPDLYSKEWNKAVPFCE SQKRVMTLTAPLGFSVHLRSTDEEFISQKTREEIGLGSPLVPMGDDD
GGPEATGNQSAWMGHGSPLSHSSKGTPLLATEFRGLALKYLLTPVNFFQAGYSSRRFDQQVEKYHKPC

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FIGURE 1181A

CCGGTTCCTCCGCGGTTCGACGCTCCAGCCGCCTCCTCCGCGCAGCCGCCGCTCAGCTGCTCGCTCTGTGGGTCCGGT
CCTCTCCGGCACTTGGGGCTCCAGTCGCGCCCTCCAAGCCCTTCAGGCCGCCCCAGTGTCTCTCTCTTCTCCGGC
CAGACCCAGCCCCGCGAAGATGGTGGACCGCGAGCAACTGGTGCAGAAAGCCCGGCTGGCCGAGCAGGCGGAGCG
CTACGACGACATGGCCGCGGCCATGAAGAACGTGACAGAGCTGAATGAGCCACTGTCTGAATGAGGAACGAAACCT
TCTGTCTGTGGCCTACAAGAACGTTGTGGGGGACGCGCTCTTCTGAGGGTCATCAGTAGCATTGAGCAGAA
GACATCTGCAGACGGCAATGAGAAGAAGATTGAGATGGTCCGTGCGTACCGGGAGAAGATAGAGAAGGAGTTGGA
GGCTGTGTGCCAGGATGTGCTGAGCCTGTGATAACTACCTGATCAAGAATTGCAGCGAGACCCAGTACGAGAG
CAAAGTGTCTACCTGAAGATGAAAGGGGACTACTACCGCTACCTGGCTGAAGTGGCCACCGGAGAGAAAAGGGC
GACGGTGGTGGAGTCTCCGAGAAGGCCTACAGCGAAGCCCACGAGATCAGCAAAGAGCACATGCAGCCCACCCA
CCCCATCCGATTAGGCCTGGCTCTTAATACTACTCCGTCTTCTACTATGAGATCCAGAAGCCCCAGAGCAAGCGTG
CCACTTGGCCAAGACCGCTTCGACGACGCCATCGCCGAGCTTGACACCCTCAACGAGGACTCCTACAAGGACTC
CACGCTCATCATGCAGCTCCTCCGCGACAACCTCACGCTCTGGACGAGCGACCAGCAGGACGACGATGGCGGCGA
AGGCAACAATTAAGGCCCCAGGGGAAGTGGCAGCGCACGCGGATGCTACTACTGCAGTCTTTATTTTTTCCCAT
GAGTTGGGGGTCGGGTGGGGGAGGGAAGGGAGGGATGACCTTCCCAGGGAGAAACCCACGACCTGTCTGTCTT
TGATCGCTCTTTGACATTTTTGCCAAAATACCACTAGTGGAAAGTCAGGCTAGCTGTGCTGGTATTGGAATAGC
AGCCTCACACTGGCGTCTGGACTGTTCTGTAGATTTCATGCAAGTGGAGCTGTCTGTCTCTAATTTAACTTATTGC
TAGATAATAGGGTTTTTTCAGATGAAAAGAAAACCTTAAAGAGGAATGGCCCTCATTAGTAAGTTCTGTGGTTCCAG
TAAGGATTTTTATGTACATACGCTCTCGTCTCTCGTTTTTGGGTACTTTCTATCTCATCTGTCTCGGCTCTGCATG
TTTTCCAGGGTGTAGCCTACAGACATGGAACAGTGTAAATCCAGACTGACAGACTTAGAACCTGAGGTCTCATT
CATCCTTATGGTTTAGGCCCTTGCCAGTTTTCCGAAGTCTCTGATTAGTTGACAGTATTAACACTAAATTGCAGTT
TACAGTATTTCTACATTACAGCCATATGTAACATCAAGCCATCGATTGTGTACTTTTCCTTTGCTAGTTGTTTGG
GCTTTAACATCCTTATTACGCCTTATCCAGGTTGGTTTTTGTCTGTGATCGGTCTCCTAGGCTAAATGAGAATGAA
AGCGACTTCAGGTTTTTGGTTTCATAGGTGCTCGGCAGGTGGCTGTGGGATTTTTTTTTTTTGGTCTTTCTTTCTC
TTAACGTAAATCCACCACCAAAATTATTAATCCTCTTGAGAGAAACGTGAAACGCCACAAAAATAGAGAAAATTC
AGGTCTGTATGTATGGATCGTGTGGTATTTTCAGAGAACATCCCGCTTCTGAAGCTGCTGCAGCTCCCTCCTC
AGGGATCACACTGCCGTCACCCACTCTGCACTGGGGCGTTTCTACTGCGCCTCGTGTGGCGGACGCAGCTGGG
TGCAGAAGCTGTGGGGTCGGAGAGGCGTTTGGAGAAGGTCTGTGGTGCAGTGTGTGAAAATTCAGGTGCTAGAAG
CCTACTGGTAGAAAAACCCAAAAGGAAGAGCTATATCCTTAACCATCTGTCCAATTTCCGGAGCCTTGTCAAGT
TGTCAGTTTTTCTCCCGAAGACACTCCTTCCCCAAGTAATTGTAGGAAGATAAAAAAAGTGTACCAGATAAC
AAACACTTAACCTCCTATTGACCAGAACTTTTCTCTCGAGATAGTTTTTTCTTTTAAATGAAAAAAGCATAGG
AATTGGAGATTGGCTTGTCTCACGCAGCCAGTGCACATTTGGAATTGACGGAAACAACGTTGCTATTTCCACCCA
TTTGTTCGCGCAGCCTTAAGGCCCTCATTCTCATTTCGGGTGAATCTGTCTATCTGTGAACGTGGCCCGCATGT
GCATTCTTTTTTTATATATATAAAGTCAGTGACGAGGCACTCCCAGAGCTGTAATGACACCACACTTGTTTTC
TTTGTTCCTTTGTTTTATTTAGGCAAGAAGAGGTGTGAGTAATTGAGGAAAACTGACAGATGCTTTTGCTAATA
CCAAAATTGAGCTTACAATTAGGAAGTGAATGTGTAACAGGATACAGGTGACAGTGAAGATAGAAGAACCACG
ATGACCACAGACTCAATGTGCTCTGTAACATCGCACAGTTTACCCAGCATGACTTTCCTTAGGAGGCCCCCTCCT
CACGCTAGAGTAAAAGTCCCAGTTAAGTGAAGCCTACCAGAAGAACTAGTAGAAGAAGCTTTGCCGCTTTTGTGC
CTCTCACAGGCGCCTAAAGTCATTGCCATGGGAGGAAGACGATTTGGGGGGGGAGGGGGGGGGCAGGGTAGGTGG
GGCTTTCCCTAATTTATCTTCATGTCCAGTGAGCAGTGTTCGCTTTTTCCTTGTAGCATTTGGAAATGATTTACT
GGAATTACAAAACCTATTTTCTTTTAAATTTTTCAGCTTTGGCTCTGGCTGCTTTTGTAGATAATGCAAGATAAAA
ATCACACCTGAGGGCTGAAAACGGAGAGGGAATGGGAGACTTGATATTTAAGCAGCTTGAATGGTTTTTCTTTTC
TTTATTTTAAAGAAATGCACCTTGCCCTATGATACTGTCTCTCCAGTGAAATGATTACTCCTCCATTACTCTATTG
ATACAAATATTGTGCATGCTAGTGTGTATTTCTATACAGTAGCTTGAAATTGATTAACTTATACTGTAGGTGTTA
TGTATTCCATGACAAAAAAATTAAGTCTTCAAATTTTTTAAAGGTTTTTTTTTTTTTAAATTTAATTTTCTTTT
TGGGGGTAAAGTTGCTCTACCAAATAGTGATTGTAACAAATGATCTGTTTTGGATGTTGCTATAGTGACATGC
AGTTATATATTTGTTTTTAAAGGGGGGGAGCAAAAGAAACACCAGTGTAGCTTAATCTTAATGTCTGGTGT
TGTCATGTTATGCAGTGAACATTTTTTAAAGGTCTAATCAGTGATTATTTTCCAGCTCCGTGTTTCTTAAGGAA

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FIGURE 1181B

TTATTTACACACGGACCATCTTTAGCAGTTTCCTCAGTGATGGAATATCATGAATGTGAGTCATTATGTAGCTG
TCGTACATTGAGCAAATAAACTTACAGATCTGACGCC

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FIGURE 1182

MVDREQLVQKARLAEQAERYDDMAAAMKNVTELNEPLSNEERNLLSVAYKNVVGARRSSWRVISSIEQKTSADGN
EKKIEMVRAYREKIEKELEAVCQDVLSLLDNYLIKNCSETQYESKV FYLKMKG DYRYLAEVATGEKRATVVESS
EKAYSEAHEISKEHMOPHTPIRLGLALNYSVFYYEIQNAPEQACHLAKTAFDDAIAELDTLNEDSYKDSTLIMQL
LRDNLTLWTSDQQDDDGEGNN

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FIGURE 1183

AGCAGTGGCCCCAAAGAGGAGCAGCAGACAAGAGTGCAGTGGTGGCTGCCGCCGCACCAGCCTCAGTGGCAGATGA
CACACCACCCCCCGAGCGTCGGAACAAGAGCGGTATCATCAGTGAGCCCCCTCAACAAGAGCCTGCGCCGCTCCCCG
CCCGCTCTCCCACTACTCTTCTTTTGGCAGCAGTGGTGGTAGTGGCGGTGGCAGCATGATGGGCGGAGAGTCTGC
TTGACAAGGCCACTGCGGCTGCAGCCTGGCCTTCCCTGTTGGCCAATGGGATGACCTGGCGGGCGGCCATGGCGGT
GGACAAAAGCAACCCTACCTCAAAGCACAAAAGTGGTGTGTGGCCAGCCTGCTGAGCAAGGCAGAGCGGGCCAC
GGAGCTGGCAGCCGAGGGACAGCTGACGCTGCAGCAGTTTGCGCAGTCCACAGAGATGCTGAAGCGCGTGGTGTGA
GGAGCATCTCCCGCTGATGAGCGAGGCGGGTGTGGCCTGCCTGACATGGAGGCTGTGGCAGGTGCCGAAGCCCT
CAATGGCCAGTCCGACTTCCCCTACCTGGGCGCTTTCCCCATCAACCCAGGCCTCTTCATTATGACCCCGGCAGG
TGTGTTCCCTGGCCGAGAGCGCGCTGCACATGGCGGGCCTGGCTGAGTACCCCATGCAGGGAGAGCTGCCTCTGCC
ATCAGCTCCGGCAAGAAGAAGCGGAAACGCTGCGGCATTGTGCGCGCCCTGCCGGCGGCGCATCAACTGCGAGCA
GTGCAGCAGTTGTAGGAATCGAAAGACTGGCCATCAGATTTGCAAATTCAGAAAATGTGAGGAACTCAAAAAGAA
GCCTTCCGCTGCTCTGGAGAAGGTGATGCTTCCGACGGGAGCCGCCTTCCGGTGGTTTTCAGTGACGGCGGGCGGAA
CCCAAAGCTGCCCTCTCCGTGCAATGTCACTGCTCGTGTGGTCTCCAGCAAGGGATTGGGGCGAAGACAAACGGA
TGCACCCGCTTTTAGAACCAAAAATATTCTCTACAGATTTTCATTCTGTTTTTATATATATATTTTTTTGTTGTC
GTTTTAACATCTCCACGTCCCTAGCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1184

MAVDKSNPTSKHKSGAVASLLSKAERATELAAEGQLTLQQFAQSTEMLKRVVQEHPLMSEAGAGLPDMEAVAGA
EALNGQSDFFPYLGAFPINPGLFIMTPAGVFLAESALHMAGLAEYPMQGELPLPSAPARRSGNAAALCAPCRRRIN
CEQCSSCRNRKTGHQICKFRKCEELKKKPSAALEKVMLPTGAAFRWFQ

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FIGURE 1185

GGAACAAAAGCTGGAGCTCCACCGCGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTTCGG
CACGAGCAGAAGAGGGGGCTAGCTAGCTGTCTCTGCGGACCAGGGGAGACCCCGCGCCCCCGGTGTGAGGCGG
CCTCACAGGGCCGGGTGGGCTGGCGAGCCGACGCGGCGGCGGAGGAGGCTGTGAGGAGTGTGTGGAACAGGACCC
GGGACAGAGGAACCAATGGCTCCGCGAGAACCTGAGCACCTTTTGCCCTGTTGCTGCTATACCTCATCGGGGCGGTGA
TTGCCGGACGAGATTTCTATAAGATCTTGGGGGTGCCTCGAAGTGCCTCTATAAAGGATATTAAAAAGGCCTATA
GGAAACTAGCCCTGCAGCTTCATCCCGACCGGAACCTGATGATCCACAAGCCCAGGAGAAATTCCAGGATCTGG
GTGCTGCTTATGAGGTTCTGTGATAGTGAAGAACGGAACAGTACGATACTTATGGTGAAGAAGGATTAAAAG
ATGGTCATCAGAGCTCCCATGGAGACATTTTTTTCACACTTCTTTGGGGATTTTGGTTTCATGTTTGGAGGAACCC
CTCGTCAGCAAGACAGAAATATTCCAAGAGGAAGTGATATTATTGTAGATCTAGAAGTCACTTTGGAAGAAGTAT
ATGCAGGAAATTTTGTGGAAGTAGTTAGAAACAAACCTGTGGCAAGGCAGGCTCCTGGCAAACGGAAGTGCAATT
GTCGGCAAGAGATGCGGACCACCCAGCTGGGGCCCTGGGCGCTTCCAATGACCCAGGAGGTGGTCTGCGACGAAT
GCCCTAATGTCAAAC TAGTGAATGAAGAACGAACGCTGGAAGTAGAAATAGAGCCTGGGGTGAGAGACGGCATGG
AGTACCCCTTTATTGGAGAAGGTGAGCCTCACGTGGATGGGGAGCCTGGAGATTTACGGTTCCGAATCAAAGTTG
TCAAGCACCCAATATTTGAAAGGAGAGGAGATGATTTGTACACAAATGTGACAATCTCATTAGTTGAGTCACTGG
TTGGCTTTGAGATGGATATTACTCACTTGGATGGTGCACAAGGTACATATTTCCCGGGATAAGATCACCAGGCCAG
GAGCGAAGCTATGGAAGAAAGGGGAAGGGCTCCCCAACTTTGACAACAACAATATCAAGGGCTCTTTGATAATCA
CTTTTGATGTGGATTTTCCAAAAGAACAGTTAACAGAGGAAGCGAGAGAAGGTATCAAACAGCTACTGAAACAAG
GGTCAGTGCAGAAGGTATACAATGGACTGCAAGGATATTGAGAGTGAATAAAATTGGACTTTGTTTAAAATAAGT
GAATAAGCGATATTTATTATCTGCAAGGTTTTTTTTGTGTGTGTTTTTGTTTTTATTTTCAATATGCAAGTTAGGC
TTAATTTTTTTTATCTAATGATCATCATGAAATGAATAAGAGGGCTTAAGAATTTGTCCATTTGCATTCCGAAAAG
AATGACCAGCAAAAGGTTTACTAATACGTCTCCCTTTGGGGATTTAATGTCTGGTGCTGCCGCCTGAGTTTCAAG
AATTAAAGCTGCAAGAGGACTCCAGGAGCAAAAGAAACACAATATAGAGGGTTGGAGTTGTTAGCAATTTTCATTC
AAAATGCCAACTGGAGAAGTCTGTTTTTAAATACATTTTGTGTTATTTTT

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FIGURE 1186

MAPQNLSTFCLLLLYLIGAVIAGRDFYKILGVPRSASIKDIKKAYRKLALQLHPDRNPDDPQAQEKFDLGAAYE
VLSDSEKRKQYDITYGEEGLKDGHQSSHGDI FSHFFGDFGFMFGGTPRQQDRNIPRGSDIIVDLEVTLEEVYAGNF
VEVVRNKPVARQAPGKRKCNCRQEMRTTQLGPGRFQMTQEVVCDPCPNVKLVNEERTLEVEIEPGVRDGMETPFI
GEGEPHVDGEPGDLRFRIKVVKHPIFERRGDDLYTNVTISLVESLVGFEMDITHLDGHKVHISRDKITRPGAKLW
KKGEGLPNFDNNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSVQKVYNGLOGY

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FIGURE 1187

GGCACGAGGGCCAGGAACGCCAGCCGTTACGCGTTTCGGTCTCCTTGGCTGACTCACC GCCCTCGCCGCCGCAC
CATGGACGCCCCCAGGCAGGTGGTCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTGTTAGAGAT
ACAAAAGGAATTATTAGACTACAAAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGC
CAAGATTATTAACAATACAGAGAATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAATAAGGTGATTTTTCT
GCAAGGAGGTGGGTGCGGCCAGTTCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCGGA
CTATGTGGTGACAGGAGCTTGGTCAGCTAAGGCCGAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCA
CCCTAAACTTGGGAGTTATACAAAAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTA
TTATTGCGCAAATGAGACGGTGCATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTG
TGACATGTCCTCAAACCTCCTGTCCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAA
GAATGTTGGCTCTGCTGGGGTCACCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCC
CTCGGTCTGGAATACAAGGTGCAGGCTGGAAACAGCTCCTTGTACAACACGCCTCCATGTTTCAGCATCTACGT
CATGGGCTTGGTTCTGGAGTGGATTAATAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATC
TCAAACAATTTATGAGATTATTGATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAA
GATGAATATTCCATTCCGCATTGGCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCT
TGAATCAATATGTTGTCTTGAAAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCAC
AATTGAAGACGTTCAGAAGCTGGCCGCCTTCATGAAAAATTTTTGGAGATGCATCAGCTATGAACACATCCTAA
CCAGGATATACTCTGTTCTTGAACAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAG
TATTTTTCTCAAATGAACATGTTTATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCT
GTAAAGCTGGTGGGACCTAATGTCACCTTAATTCTGACTTGAAGTGAAGCATTTTAAGAAATCTTGTTGCTTTT
CTAACAAATTCCCGCGTATTTTGCCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTGCCTGTGGACTTAAT
AATGCAAGTTGCGATTAAATTTCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGC
TGAATCTACACATCTGTGGGGTCTCCTGGGTTTACGCGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGT
GGTTTAAGAGTGCCAGGCGAAGGGCAAACCTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTT
TATATATGTTTATATTAGCAAGGTCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATA
ATACAGTTATCACTGATATATGTAGACACTTTTAGAATTTATTAAATCCTTGACCTTGTGCATTATAGCATTCCA
TTAGCAAGAGTTGTACCCCTCCCGAGTCTTCGCTTCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGT
TCTTGATTCATTTTTACCATTCTTTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCA
TTAAACTAAACATTTCTGTTAAATTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGA
GTGATACTTTGCTGAAAAGTCTTTCCCTATTGTTTATCTATTGTCAGTATTTTATGTTGAATATGTAAAGAACA
TTAAAGTCCTAAACATCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1188

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLS LKGHRSVGGIRASLYNAV TIEDVQKLA AFMKKFLEMHQL

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FIGURE 1189

CGCCCGTCGGGGTCTCGTTTCAGCAGCCAATGGGTCTGCACCTTCGTCCTCGTCAGCATT TTTGTCTAATCGCGGC
CTGTGACCTCGAAGGCGGGGAGCAGAGGGAGATACAGAAACCGACAGGGCCAGGCGCCGGTGGCTCCGAAGCGGG
GAAGTGGGACAAGATGGTTTACATCTCGAACGGACAAGTGTGGACAGCCGGAGTCAGTCTCCATGGAGATTATC
TTTGATAACAGATTTCTTCTGGGGAATAGCTGAGTTTGTGGTTTTGT TTTTCAAACCTCTGCTTCAGCAAGATGT
GAAAAAAAAAGAAGCTATGGAACTCATCTGATTCCAGATATGATGATGGAAGAGGGCCACCAGGAAACCTCC
CCGAAGAATGGGTAGAAATCAATCATCTGCGTGGCCCTAGTCCCCCTCCAATGGCTGGTGGATGAGGAAGGTAAAT
GTCTGCTCTAAGAAGCAGACAACCGGACATGCGCATT CATAGCAGAAGGAAACCATCAAGAAGTGGGAAGGCTGAC
CATGATGAGCAGTAGATGAATGTGTATGTCTAAACAAGGACTGCTCTGTGTCTCACAGATGAATGAGGTCATGC
TGGGAATTCCCTCTGCAGGGAACTGGCCTGACTGACATGCAGTTCCATAAATGCAGATGTTTGTCTCATTACCTT
TTTGTATAGTTTATTAAAGTATTAATATAGTTTTAATAAGTAAATATTTT TAGGTTGCAGAATGGACTCCTCATC
TTTATATTCACGAAAAAGCAATCTGAAGAAAACAAATAAAAGCCTGTGTATTTAGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAA

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FIGURE 1190

ARRGLVSAANGSAPSSSSAFCLIAACDLEGGEQREIQKPTGPGAGGSEAGKWDKMVYISNGQVLDSRSQSPWRLS
LITDFFWGIAEFVVLFFKTLLQQDVKKRRSYGNSSDSRYDDGRGPPGNPPRRMGRINHLRGPSPPEMAGG

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FIGURE 1191

ATGTTGGTGCTGTTTGAACGTCTGTGGGTACGCCATCTTTAAGGTTCTAAATGAGAAGAACTTCAAGAGGTT
GATAGTTTATGGAAAGAATTTGAACTCCAGAGAAAAGCAAACAAAATAGTAAAGCTAAAACATTTTGAGAAATTT
CAGGATACAGCAGAAGCATTAGCAGCATTACAGCTCTGATGGAGGGCAAATCAATAAGCAGCTGAAAAAGTT
CTGAAGAAAATAGTAAAAGAAGCCCATGAACCGCTGGCAGTAGCTGATGCTAAACTAGGAGGGGTCATAAAGGAA
AAGCTGAATCTCAGTTGTATCCATAGTCCTGTTGTTAATGAACCTTATGAGAGGAATTCGTTCAAAATGGATGGA
TTAATCCCTGGGGTAGAACCACGTGAAATGGCAGCTATGTGTCTTGATTGGCTCACAGCCTGTCTCGATATAGA
TTGAAGTTTAGCGCTGATAAAGTAGACACAATGATTGTTCAAGCAATTTCCCTGTTAGATGACTTGGATAAAGAA
CTAAACAACCTACATTATGCGATGTAGAGAATGGTATGGCTGGCATTTCCTGAATTAGGAAAAATTATTCAGAT
AATTTAACATACTGCAAGTGTTTACAGAAAGTTGGCGATAGGAAGAACTATGCCTCTGCCAAGCTTCTGAGTTG
CTGCCAGAAGAAGTTGAAGCAGAAGTGAAAGCAGCTGCAGAGATATCAATGGGAACAGAGGTTTCAGAAGAAGAT
ATTTGCAATATTCTGCATCTTTGCACCCAGGTGATTGAAATCTCTGAATATCGAACCCAGCTCTATGAATATCTA
CAAAATCGAATGATGGCCATTGCACCCAATGTTACAGTCATGGTTGGGGAATTAGTTGGAGCACGGCTTATTGCT
CATGCAGGTTCTCTTTTAAATTTGGCCAAGCATGCAGCTTCTACCGTTCAGATTCTTGGAGCTGAAAAGGCACTT
TTCAGAGCCCTCAAATCTAGACGGGATACCCCTAAGTATGGTCTCATTTATCATGCTTCACTCGTGGGCCAGACA
AGTCCCAAACACAAAGGAAAGATTTCTCGAATGCTGGCAGCCAAAACCGTTTTGGCTATCCGTTATGATGCTTTT
GGTGAGGATTCAAGTTCTGCAATGGGAGTTGAGAACAGAGCCAAATTAGAGGCCAGGTTGAGAACTTTGGAAGAC
AGAGGGATAAGAAAAATAAGTGGAACAGGAAAAGCATTAGCAAAAACAGAAAAATATGAACACAAAAGTGAAAGT
AAGACTTACGATCCTTCTGGTGACTCCACACTTCCAACCTGCTCTAAAAAACGCAAAATAGAACAGGTAGATAAA
GAGGATGAAATTACTGAAAAGAAAGCCAAAAAGCCAAGATTAAAGTTAAAGTTGAAGAAGAGGAAGAAGAAAAA
GTGGCAGAAGAAGAAGAAACATCTGTGAAGAAGAAGAAAGGGGTAAAAAGAAACACATTAAGGAAGAACCA
CTTTCTGAGGAAGAACCATGTACCAGCACAGCAATTGCTAGTCCAGAGAAAAAGAAGAAAAAGAAAAAAGAGA
GAGAACGAGGAT**TAA**

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FIGURE 1192

MLVLFETSVGYAIFKVLNEKKLQEVDSLWKEFETPEKANKIVKLKHFEEKFQDTAEALAAFTALMEGKINKQLKKV
LKKIVKEAHEPLAVADAKLGGVIEKLNLSCHSPVVNELMRGIRSQMDGLIPGVEPREMAAMCLGLAHSLSRYR
LKFSADKVDTMIVQAISLLDDLDKELNNYIMRCREWYGWHFPELGKIIISDNLTICKCLQKVGDRKNYASAKLSEL
LP EEVEAEVKAAA EISMGT EVSEEDICN I LHLCTQVIEISEYRTQLYEYLQNRMMAIAPNVTVMVGELVGARLIA
HAGSLLNLAKHAASTVQILGAEKALFRALKSRDTPKYGLIYHASLVGQTS PKHKGKISRMLAAKTVLAIRYDAF
GEDSSAMGVENRAKLEARLRTLED RGIRKISGTGKALAKTEKYEHKSEVKTYDPSGDSTLPTCSKKRKIEQVDK
EDEITEKKAKKAKIKVKVEEEEEEEKVAEEEEETSVKKKKKRGKKKH IKEEP LSEEE PCTSTAIASPEKKKKKKKKR
ENED

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FIGURE 1193

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAAGTGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCC**ATG**CTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCCAGAGCAGGCAGTG
GAATCAGTGCCCTCCTGGCCCAGACCAAGTTTGGAGACTACAACCAGAACACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTGCAGATTGTGTGCGCAATGGAACACTATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTTAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTTAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCA
TGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAGTCTTCTCAATCTG
ACTGTAAATCT**TAA**CTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCCTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAAA

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FIGURE 1194

MLCYVTRPDAVLMEVEVEAKANGEDCLNQVCRRLGIIEVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQTRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQTKFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSAVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSESSMNCSSCEGLSCQQTRVLQ
EKLRKLKEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQHVVYLPHTTSLNLNLTVI

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FIGURE 1195

GCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCAGCCCTCTCCGAGTCCGGGGCTG
GGTCCCACAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAGGCGGCTGTGGCGGCAGCGGCAGCCCCAG
CCATGCTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTGGAGGCGAAAGCCAACGGCGAGG
ACTGCCTCAACCAGGCATATCTTTTTCTTGCACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCCA
GAGCAGGCAGTGGAACTCAGTGCCCTCCTGGCCAGACCAAGTTTGGAGACTACAACCAGAACACTGCCAAGTAT
AACTATGAGGAGCTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTG
GAGGGGACCAGCCAGGCTTCAGCTGAATACCAATTTTGCCAGATTGTGTGCGCAATGCAAAACTATGGCATAGAA
TGGCATTCTGTGCGGGATAGCGAAGGGCAGAACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAA
GATGACTTTAGCCCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATAT
TTGACGGTCACCAAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAAATGATCAGCACCAGGGCGGCCACGCGG
CTCTACCGAGCGATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTAT
AGCCGTGACTTGAAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGGGCAAGAAATTATGTC
TTTGATATTTAAAAGAACATCAAAGGAGGTGTATGACCATGCCAGGAGGCTCTGTACAATGTGGCGTTGTGGAC
CTCGTTTCAAGAACAACCAGAGCCCTTCACACTCGCCTCTGAAGTCTCAGAAAGCAGCATGAACTGCAGCAGCT
GCGAGGGCCTCAGCTGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCA
TGGTGTGCTGCGAGGAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCG
CCCAGCTACAGTCATGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCA
GTCTTCTCAATCTGACTGTAATCTAATCTGTTGTGCTTTTGTGGACTTGGCAIGTTTTCCATGAACTGCACATTT
ATAAACTATTAAAATGATAGATTGTGGAGAAAAGTAATTATTCCAACACCCATCTGCCATGCGATGTTAAAAAAA
AAAAAAGGAAGAAAAATAACACAGCTACTCCTCACTGCAAAAACATATCCATGCGTAGAATCAACAACCTCCAGT
CATGGGACCAGGAGGAGCTCTGGGACGCAGACACATTCCCTGGATGTTGATTTTTTTTTATGATCTAGTAAAGGAA
TAGGTAAAGTCTTTGATGTGAGTGAAGTGGCAACATAGCCAAAAAGTTGGGTACCTTTTAGGAAATGATGTTGTA
AGTCTCCTTAATGTATCCTGAGGTAAAGTTTCCCTACTGGCAGCAGATTTTGTAAAGAATTACTTTTAAGAATTCAT
TCTTTTTGTATGGTCATGGAGCTCCAACCATTTTTAATAGGAAAGTCTTTTGTAAAAATTGTTGTCGTTTTAATGT
CATTTCTGTCTTTATAACTTGATCAAGAATGATTGGAAGGCAAACAGGTTTACAAATCAATTCTGTGACTTTTAA
AAAGTTGACAATGTTGTGATTTTAAACCAGTGTGGCTAGTAAAAAGCAGCTCACTCAATGTTGGGTGGCTCCCT
ATTCCTTTACGCTCCCCCTATCCCTACCCCAAGCCTTTCGATTATAAAATACTACCAATCTTGTATATAAGATT
ACTGTGGAGTAGTCAAGTACTCCCCGGGCCTTCTGAGCTGGTGAATATTTTATTTTCAAGTGAACAGAGAGC
ACTCTCCTTGGGAAGGGAAAGCGGCTTGCTGAGTGAGAGATGGAGCCTCATGGTGTACAACCTGAGGGTAGTTAAC
TCATCACTTCTCCAAGCACTCGATCCCAGCTTCACCCACTGGTGTGCTTTGCTTGAACCTGTTCAAGCCTTTTA
TAGCCTTACCATAAGTATTTAGATATGGTGTCCCTTTCTGTTTTTGGGGGGGAGTTTTGTTGTGTTTTTTTAAA
GTAAGTGCTTAAGTATTAACCTTGGGTGTCCCTCTGTATGTTTCGAAGGGTTTTGGTTCTTTTTGCTTCTGT
TTTCTTAAACATGTTTTTCACTCCCACTTGGGCATTTTGAAGCTGGTCAGCTAGCAGTTTTTCTGGGATGTCGG
GAGACCTAGATGACCTTATCGGGTGCAATACTAGCTAAGGTAAAGCTAGAAACCTACACTGTCACTTTACTGAGA
TTTCTGAGTATACTTTTCATATTGCCTTAATGTAGCAGTAATGTGTTTATGCATTTGTTTCTTTGCACAGACATT
TTGTCAAATATTAAAACCTCTACTTTTTTATGGCACATATTAGCATATAAGCCTTTATTCCAAGAGGTATTTATTT
TTTCACTTGTAAAAAATAATGTTTCCACGTAAAGAACTCTGTTATATCCTAGAGGACTCTGTCTTTTATATTTCG
GGATAATAAAGACTTTAAAGCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1196

MENYGIEWHSVRDSEGQKLLIGVGPEGISICKDDFSPINRIAYPVVQMATQSGKNVYLTVTKESGNSIVLLFKMI
STRAATRLYRAITETHAFYRCDTVTSVMMQYSRDLKGHLASLFLNENINLGPRNYVFDI

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FIGURE 1197

AGAAGGGAAGGTAGACATCAGGTTCTCCCTGGAGACTTTTCGTTTTTCATTTACGCTGCGGAAACTGACGTTTTTG
CCTAACACCCCATGTAATGTAAACGTATAGGCTTGAGTACGTGTCCGGCCGCATGTGTAGTGAACCCTAAAGCTT
TCCTAATTGTAGTTAGCATCGTCCCTAAGCGGAACGATTTTCCGTGAACATGATTTGTACTTTTCTACGAGCCGT
ACAGTATACGGAGAAGCTGCACAGGTCTCGGCAAAGCGATTGCTTTTGCCATACATCGTGCTTAACAAAGCGTA
CTTGAAGACTGAGCCCAGTTTGAGATGTGGGCTTCAATATCAAAAAGAAAACGCTGCGACCTAGATGTATTCTTGG
AGTCACCCAGAAAACCATCTGGACGCAGGGACCGAGCCCCGAAAAGCAAAGGAGGATGGCAGCAAACAAGTGTC
TGTGCACAGGAGTCAGAGAGGGGGAACCGCCGTCCCAACATCACAAAAAGTGAAAGAAGCCGGAAGAGATTTTAC
CTATTTAATAGTGGTGCTTTTTGGAATCAGCATTACAGGTGGCTTGTTTTACACGATTTTCAAAGAACTTTTTTC
TTCATCCAGTCCTAGCAAGATATATGGGAGAGCCTTAGAAAAATGCAGATCACATCCTGAGGTGATCGGTGTCTT
TGGTGAGTCTGTTAAAGGCTATGGGGAGGTGACAAGGCGGGGTGCGCGGCAGCATGTCAGGTTCACTGAATATGT
AAAAGATGGGCTGAAACACACGTGTGTGAAATTCTACATTGAGGGCTCTGAGCCAGGGAAGCAAGGAACGGTGTA
TGCGCAAGTGAAAGAGAACCCAGGAAGTGGTGAATATGATTTTCGATATATATTTGTAGAAATTGAATCTTATCC
TAGAAGAACTATTATCATTGAAGATAATCGATCCCAAGATGATTAATAATCAAGCAAGCAGGTTTCTGATGGATG
TTGAATGGCGTGGACTCGCTACTCCGTTCTTCACAGCTGCCTTCCAGAATGTGTTCAAAGAAAGACAAGAAGGA
GTGTATGGCTTATAAAGTGAATCTAATACAGTATTTGTTGCATTTAAACAACTAGACATTTTCTTACGGAAAAA
TTATGAAATACAGCATATTTTATGTTCTCQCATTGACTCAATCATGACAATATTTCTGCTTTAACACCATCTTTC
GTGATTAGAAATGTTTGTTATTGGAAATGTTACACCATGTAAATAAAGGAAATAGATTTTAGTATTGTATTTCATT
TTATATTATAGAACTGCATAATGTCTGCAGAATAAAATTAAAACTAACAAATAAAAAAAAAAAAAAAAAA

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FIGURE 1198

MICTFLRAVQYTEKLHRSSAKRLLLPYIVLNKAYLKTEPSLRGCLQYQKKTLRPRCILGVTQKTIWTQGSPRKA
KEDGSKQVSVHRSQRGGTAVPTSQKVKEAGRDFTYLIVVLFGISITGGLFYTIFKELFSSSSPSKIYGRALEKCR
SHPEVIGVFGESVKGYGEVTRRGRRQHVRFTYVVDGLKHTCVKFYIEGSEPGKQGTVYAQVKENPGSGEYDFRY
IFVEIESYPRRTIIIEDNRSQDD

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FIGURE 1199

CAGGGCTGGGCGGCGGCGGCGGCGGCGGCTCATGGAACGCCAAGAGGAGTCTCTGTCCGCGCGGCCGGCCCTGGAG
ACCGAGGGGCTGCGCTTCCTGCACACCACGGTGGGCTCCCTGCTGGCCACCTATGGCTGGTACATCGTCTTCAGC
TGCATCCTTCTCTACGTGGTCTTTTCAAGAGCTTTCCGCCCGGCTAAGAGCCTTGAGGCAGAGGCAGCTGGACCGA
GCTGCGGCTGCTGTGGAACCTGATGTTGTTGTTAAACGACAAGAAGCTTTAGCAGCTGCTCGACTGAAAATGCAA
GAAGAACTAAATGCGCAAGTTGAAAAGCATAAGGAAAAACTGAAACAACCTGAAGAAGAAAAAAGGAGACAGAAG
ATTGAAATGTGGGACAGCATGCAAGAAGGAAAAAGTTACAAAGGAAATGCAAAGAAGCCCCAGGAGGAAGACAGT
CCTGGGCCTTCCACTTCATCTGTCTGAAACGGAAATCGGACAGAAAGCCTTTGCGGGGAGGAGGTTATAACCCG
TTGTCTGGTGAAGGAGGCGGACTTGCTCCTGGAGACCTGGACGCAGAGGCCCGTCATCTGGCGGATGAGGCTAAG
AATCTTGTTAGTGTCACTTTTGACATTAGCAAGATGAACCTTAACCTCGATTCAATTGCCTTACGCACGCTTT
TCACAGTGACTAGCCAAGGGGAGGTGGGGTTGATTCTGTTCTTAACCTACACCTGCATATGTCAGGGCTCCAGTC
AGCAAAAGGTATAGATGTTGCCTCTAGGCATGAGGTCATTGGTCACATTCTACTTGGAGACAGTGATTGCATTCA
TTGATTTTCATGGTTAATTGCTAGTTGGTAGGTAAAGGCCTCTAGATGATTAGCAATCTTGATAAAAGAGGCCTAG
TAATGTTCTTTTGAGGTTAGAAATCCTTGCTGCTAGGACAGTCTCTGTGACAGGTTGCGTTGAATGATGTCTTCC
TTATCAATGGTGAGCCCACCAGTGAGGATTACTGATGTGGACAGTTGATGGGGTTTGTCTGTATATTTATTTT
TATGTACAGAACTTTGTAAAAACGAACTATTTAAAAACAAGAATAACATTTTATGATCTTTATTCAAGGAGA
TTTATGGACTTCAATTTGTCTATCAAACATTAAATAGCTTTTTATTACAACCTCAAAAAAAAAAAAAAAAAAAA
AAAAAAAA

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FIGURE 1200

MERQEESLSARPALETEGLRFLHTTVGSLLATYGWYIVFSCILLYVVFQKLSARLRALRQRQLDRAAAAVEPDVV
VKRQEALAAARLKMQEELNAQVEKHKEKLKQLEEEKRRQKIEMWDSMQEGKSYKGNAKKPQEEDSPGPSTSSVLK
RKSDRKPLRGGGYNPLSGEGGGLAPGDLDARHLADEAKNLVSVTFDISKMNP

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FIGURE 1201A

GAGCCGGTGGCGCAGGTGTCTGGGGTCTCTGAGCGCCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGCGGGCGGCTGCGGCCTCATGACCAGCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCTGCGCGCCCGCCGCGCCCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCCCTCGGCG
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCCTCGTCTGGTGTCTCTCTGCGGCGCCGTGGAGTCC
CGGTGAGAGGCGGCGCCCGCGCGGAGCGCCAGCCAGTTGAGCCCCATATGGGGGTTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACTCCTGTTGCACATCCGAAGTCATAAACAGAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTCAGAGAATTGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCCGATTCTGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTGACACCACCTCAAACACCAACGCCCCGGGAGAGCATGGAAGATGTTTATCTCAATGAACCCAAA
CAGGAGAGCAGTGCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTGAGGACTTCCATGGA
GGGCAGGTCTTTTTCTCCACCTCAGAAATGCCAACCATTTCCAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCAAACCAAAGCTTAGTTTCCCTTCTTGGTGATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTTCCAGCAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCAGCAGCGCTGTGAGGCC
ATGGTGGGGCACGAGATGGCCTCTGACTCTTCAAACACTTCACTGCCATTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAATCACTTTTTTCAGTGGCAGGTGGAGCAGGAAGAAAGCAAATTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTCCCTTCATATTGCTGTTGCCAAAGGAGAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACCTTCACATGCTGGATATTAAAGAGCACAATGGACAGAGTGCCTTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTGCTGAGAAGGGCCACTCCCAGGTGCTTCAGGCGATTGAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAACTATGATGGCCTGACTCCCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCCAGAGAAATCAACAGCCTCATTACCTGAAGTTTCCAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAAGTGGCCGCACAGCCCTGCATTTGGCAGCTGAAGAAGCAAATCTGGAACCTATTGCGCTCTTTTTGGAG
CTGCCCAGTTGCCTGTCTTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCCGCCTGTTGATGAGGAAGGGAGCAGACCCAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTTGGTTCCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCCTGAAGGGAAAAG
TCCATTGAGCAGAGAGCTCCACCGTATTTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTGAGTTAG
GCAGTCTGATGTATCTGTACATAGACCATTTGCCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTTATATTAAAAGAAAAGAAGAAAATATCTAATTTCTTGGCAGATTTG
CATATTTCATACCCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAGCATGTGAAAGGAAAAGGTAAATACAGCATTGAGGCTTCATTT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTGTCCTTAAAAATATTGTACATACTTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAACAAGTGAATTGTTGCTATTTAAAAAAATTTTACA
ATTCCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTGGAATTGTAAAGATGCTTTTTCTCATGCATTGAAATTATACATTATTTGT
AGGGAATTGCATGCTTTTTTTTTTTTTTCTCCCAGACAGGCTCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCTACCTGAGCCTTCTGAGTAACTGGGAC
TACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCTGAGCTCATGCCATCTGCCTGCCTTAGTCTCCCAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCCGGCTGGCAGTTGCATGGAAGAGAACACCTCTTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTTTACCTTTATTGAAACAACAAAAGTCAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTGAGAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTTGGCTTTGATTACACACTAAGTTTTTGTG

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FIGURE 1201B

ATAAATTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAAAAAGAAAATCTCATTAGTGAACTTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTCTTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAACT
GATGGTTTTAAATAAACTAATTCATAATAAAAAAAAAAAAAAAAAA

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FIGURE 1202

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPLNLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPV EPHMGVGRQQRGPFQGV RVKNSVKELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDLSLDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNI INIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPQKCPFQVRGSQQMIDQASLYQYSPQNQHVEQQP
HYTHKPTLEYSPPFPIPPQSPAYEPNLFDPESQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEESKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVAAHQHLIVQDLVNIGAQVNTTDCWGRTPLVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQPHSPEVQELLKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAAEEANLELIRLFLELPSCLSFVNAKAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVPDGPVGEQIRRLKKGKSIQQRAPPY

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FIGURE 1203A

GAGCCGGTGGCGCAGGTGTCTGGGGTCTCTCGAGCGCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGCGGGCGGGCTGCGGGCCTCATGACCAGCCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCTGCGCCCGCCGCCGCCCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCTCGGGC
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCCTCGTCTGGTGTCTCTCTGCGGCGCCGTGGAGTCC
CGGTGAGAGGCGGCGCCCGCGCCGAGCGCCAGCCAGTTGAGCCCCATATGGGGTTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACCTCTGTTGCACATCCGAAGTCATAAACAGAAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTTCAGAGAATTGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCCGATTCTGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTTGACACCACCTCAAACACCAACGCCCGGGGAGAGCATGGAAGATGTTTCATCTCAATGAACCCAAA
CAGGAGAGCAGTGTCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTGAGGACTTCCATGGA
GGGCAGGTCTTTTTCTCCACCTCAGAAATGCCAACCATTCGAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCCAAACCAAAGCTTAGTTTCCCTTCTTGGTGTATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTCAGCAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCAGCAGCGCTGTGAGGCC
ATGGTGGGGCACGAGATGGCCTCTGACTCTTCAAACACTTCACAGCTTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAATCACTTTTTAGTGGCAGGTGGAGCAGGAAGAAAGCAAATTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTCTTTCATATTGCTGTTGCCAAAGGAGAAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACTTCACATGCTGGATATTAAAGAGCACAATGGACAGAGTGCCTTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTGCTGAGAAGGGCCACTCCCAGGTGCTTCAGGCGATTGAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAATATGATGGCCTGACTCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCAGAGAAATCAACAGCCTCATTACCTGAAGTTTCAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAAGTGGCCGCACAGCCCTGCATTTGGCAGCTGAAGAAGCAAATCTGGAACCTCATTGCGCTCTTTTTGGAG
CTGCCCAGTTGCCTGTCTTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCTCGCCTGTGTGATGAGGAAGGGAGCAGACCCAAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTTGGTTCCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCCTGAAGGGAAAAG
TCCATTACAGCAGAGAGCTCCACCGTATTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTCTAGTTAG
GCAGTCTGTATGTATCTGTACATAGACCATTTGCCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTATATTTAAAGAAAAGAAAGAAAATATCTAATTTCTCTTGGCAGATTTG
CATATTTACATACCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAAGCATGTGAAAGGAAAAAGGTAAATACAGCATTGAGGCTTCATTT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTGTCTTAAAAATATTGTACATACTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAACAAAGTGAATTGTTGCTATTTAAAAAATTTTACA
ATTCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTCGAATTGTAAAGATGCTTTTTCTCATGCATTGAAATTATACATTATTTGT
AGGGAATTGCATGCTTTTTTTTTTTTTTCTCCCCGAGACAGGGTCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCCTACCTGAGCCTTCTGAGTAACCTGGGAC
TACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCCTGAGCTCATGCCATCTGCCTGCCTTAGTCTCCCAAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCCGCTGGCAGTTGCATGGAAGAGAACACCTCTTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTTTACCTTTATTGAAACAACAAAAGTCAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTAGAAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTGGCTTTGATTACACACTAAGTTTTTGTA

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FIGURE 1203B

ATAAAATTTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAAAAAGAAATCTCATTAGTGAAC TTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTCTTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAAACT
GATGGTTTTAAATAAACTAATTCATAATAAAAAAAAAAAAAAAAAA

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FIGURE 1204

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPINLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPVPHMGVGRQQRGFQGVVRVKNVKELELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDSLSDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNIINIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPQKQPFQVRGSQQMIDQASLYQYSPQNHVEQQP
HYTHKPTLEYSPPFPIPPQSPAYEPNLFDPESQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEESKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVANQHLLIVQDLVNIGAQVNTTDCWGRTPLHVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQQPHSPEVQELLLKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAEEANLELIRLFLELPSCLSFVNAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVPDGPVGEQIRRLKKGKSIQQRAPPY

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FIGURE 1205

GGCCGCGCGTCCCAGAGAGCCAGCCCCGGCCGCCGTCGCGGGGAAGTGCCGCCTGGTGGGGTCACGGCGCCTGAA
GCCCACGTGCGCCGCCGAGCCCGAGGTGGCCTCGAGCGCGCGGCTGACAGCACAGCCCGCTGAGCTGCCTCCC
GCGCTCCTCCCCGAGGAAAGGATTTTGATTTCAAAGAAAGGAAGGAAGGAAGGACAACCTCCCAGCTTCCCCGTCC
CGCCCTCCCCGCTCCGAGGGCCGCGCCAGGCCATGCCAAGAAGGCGGCGGCGGCGGCGGAACCAGCAGAAGGGAC
TTTCTTGGCAGCCCGGCGACGAGGAGCGCGGACAGTGAGTTTGCTCTGCCCCGGTTTCATGGTTCTTCAAGCCCT
CTAGGAGGCCGAAAGCTGCAGCCCCCTCCCCTTGCCCCGAAGAGCCTTCCGCGTTCTCTCGCCCTCGGGCCCACCC
CGCGCCGCCCCGGGCTCCCCGCCGCCGACGCCAGTGCCCTCTGCCCCGCGCGGTGGATGGCATGATGGTGCAGGGA
AGGCACCGCGGCCCTTGCCAGCTGAGTCGCGACGGCCGCCGGGGCGGCGGCGAGTGGCCGCGGCAGCGCGGTGGT
AGCGGGCTCCCCAGCGGCATGCCAGTGCCCCCGGGCGCGATGGCTAGCGGCAGCGCCGGGAAGCCCACTGGCGA
GGCGGCTTCTCCGGCTCCTGCGAGCGCCATCGGCGGGGCCAGCTCGCAGCCGCGGAAGAGGCTGGTATCCGTCTG
CGACCACTGCAAGGGCAAGATGCAGCTGGTGGCTGACCTGCTGCTGCTGTCGAGCGAGGCGCGGCCGTGCTCTT
CGAGGGCCCCGCTCCTCTGGTGCCGCGCCGAGTCCTTCGAGCAGTGCCGGGACACCATCATCGCGCGACCAA
GGGGCTCTCCATCCTCACCCACGACGTGCAGAGCCAGCTCAACATGGGCCGCTTCGGGGAGGCGGGGGACAGCCT
GGTGGAGCTGGGCGACCTGGTGGTGTGCTGACCGAGTGCTCGGCCCCACGCGGCCTATCTGGCCGCTGTGGCCAC
GCCGGGCGCCAGCCCGCGCAGCCGGGCCTGGTGGACCGCTACCGCGTGACGCGATGCCGCCACGAGGTGGAGCA
GGGTGCGCCGTGCTGCGCGCCACGCCGCTGGCCGACATGACGCCGAGCTGCTGCTGGAGGTGTCGAGGGCCT
GTCGCGCAACCTCAAGTTCTGACGACGCGTGCGCCCTGGCCAGTGACAAGTCACGGGACCGCTTTTCGCGGGGA
GCAGTTCAAGCTGGGCGTCAAGTGATGACACCAGCGCGTCGGCGCTGCTGGCCTGCGTGCGCGAGGTGAAGGT
GGCGCCAGTGAGCTGGCGCGCAGCCGCTGTGCGCTCTTCAGCGGGCCCTGGTGCAGGCAGTGAGCGCCCTGGT
AGGCTTCGCCACCGAGCCGCGAGTTCTGGGTGCGCGCGCAGCTGTGAGCGCCGAGGGCAAGGCGGTGCAGACCGC
CATCCTGGGCGGCGCCATGAGCGTGGTGTGCGCCTGCGTGCTCTGACCCAGTGCCCTCAGGGATCTGGCGCAGCA
CCCCGACGGGGGCGCCAAGATGTGCGACCACAGGGAGAGGCTGAGGAACTCGGCCTGCGCCGTGTCTGAAGGCTG
CACCCTGCTATCTCAGGCTTTAAGGGAGAGGTCTTCGCCAGGACTTTACCGCCAGTGAATTCCAATTCTGTGAA
TTAGCACCCCAACCCCATACCCCTTCTTCCACCCCAAGACTAAAGGAAGATACTTACTCTCTGCCCCCTCTCCATT
TATACCAAAGAAATCATAGGTGAAACCCCTACCCCTCCCAACGTTAAATGCTCGAGAGGAATCTTCCACAAGGC
AGGGCCATGCACGCAACCTGCACACGCACTTGAGGGGCCAGGTGTCTCTCCACCAGCCCCCATGCAGTAGGGAC
TGGAAGATATGTCATCTGCTGGTTGTGTTATCACTCCCACCCCTACCCAGCCCGTCTTCCGGAATTTCTCAAC
TAAATTTCAATTATTGGGCAGGAAGGAGGTGATGGGTTCAATTCATTTTTGTTTTTTGTGTTTTTAATTAAGAA
AGGTTACCTCAGTTTTCACTCCTTAGACATGGATGTAGCTACCTTTTTTTGTATGTCTTTTTTTTTTAAGCAAT
CGTGTGAAATTAGGAGTATACTTGGTGAGGAAAGAGTATGAATTTGCCATGTGATTTGCAAATGGGGGGAAGCTA
CTGTGAGCGTGTGTTTTTTTTAATTTACACTATAGAGTGATTTTTTTTCCCCAACGTCAAGTTTTTACCTTGCAT
GTACTGGAGTATTTATTTATCTATTAAAAATGTTATGTTTCTCAGAAAAAACCTCGTGGCGAATCTTGGCCTC
GAGGGCCAAAT

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FIGURE 1206

MASGSAGKPTGEAASPAPASAIGGASSQPRKRLVSVCDHCKGKMQLVADLLLLSSEARPVLFEGPASSGAGAESF
EQCRDTIIARTKGLSILTHDVQSQLNMGRFGEAGDSLVELGDLVVSLTECSAHAAYLAAVATPGAQPAQPGLVDR
YRVTRCRHEVEQGCAVLRATPLADMTPLQLLLEVSQGLSRNLKFLTDACALASDKSRDRFSREQFKLGVKCMSTSA
SALLACVREVKVAPSELARSRCALFSGPLVQAVSALVGFATEPQFLGRAAAVSAEGKAVQTAILGGAMSVVSACV
LLTQCLRDLAQHPDGGAKMSDHRERLRNSACAVSEGCTLLSQALRERSSPRTLPPVNSNSVN

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FIGURE 1207

GGCACGAGGGCTGCTTGCACTCTGAATTTGGGCTATTCAAGTAGTGTGCTCAAAGTTGAAAACCGCATACAGCACA
ACTCAAGTTTGCATCAGACTGGGAAGCGAACTTAAGCCAGCGGTGCGTGGCCCAGGAGTGGGAAAGGAAATGGAT
GCCTGAAGTGGAAGAGGTGGTGCAGAGGGGGCACC GCCCATGCTGCCCTGCTTCCAAGTCTGCGCATAGGGGGC
GGCAGGGGGCGGTGATCTCTACACCTTCCACCCCCCGCCGGGGCTGGCTGCACCTATCGCTTGGGCCACAGGGCC
GACCTGTGTGATGTGGCCCTGCGGCCCCAGCAGGAGCCTGGCCTCATCTCTGGGATCCACGCCGAAGTGCATGCC
GAGCCCCGGGGTGATGACTGGAGGGTCAGCCTGGAAGACCACAGCAGCCAAGGTACTTTGGTCAATAATGTCCGA
CTCCCAAGAGGTACAGGCTGGAATTGAGTGATGGAGACCTCCTGACCTTTGGCCCTGAAGGGCCCCCAGGAACC
AGCCCCCTCGGAGTTCTACTTTCATGTTCCAACAAGTACGAGTCAAGCCTCAGGACTTTGCTGCCATTACCATCCCA
CGGTCTAGGGGAGAAGCCCCGGGTGGGGCTGGTTTCCGGCCTATGCTGCCCTCCAGGGGGCTCCACAGCGGCCT
CTCAGCACCTTCTCCCTGCCCCCAAGGCCACACTGATCCTAACTCCATAGGCAGCCTCAGCAAGCTCCGGCCC
CAGCCCCCTACCTTCTCCCTAGTTGGGGTGGACCAAGAGCCTGCCTGTTCCCGCCCCACCTGGGGAAGTGGGG
ACCACGCCTTCTGCTCCACCCCAACGCAATCGGAGGAAATCTGTTACCGAGTGTGGCGGAAGTGGATGATGAG
AGTGAGCCTCTTGAGAACCCGCCACCGTCTTATGGAGCCCAGGAAGAAACTCCGTGTAGACAAAAGCCCCACTG
ACTCCCACTGGAATCGACGTGGCCGTCTCGGAAGTACCCAGTGAGCGCTCCCATGGCTCCCCCTGCAGTTGGG
GGCGGGGAGCCCTGTGCAGCTCCTTGTGCTGCCCTGCCCCAGGAAGAGACAGTGGCCTGGGTTTCAAGTGTGATGGC
TGTGACGTCTGGTTCCATGTGGCCTGTGTTGGCTGCAGCATCCAGGCTGCCAGGGAGGCCGACTTCCGATGCCCCA
GGGTGCCGGGCTGGCATTACAGACCTAAGGTCCACCGCCAAGGCACCATCGGACACACCTGCCCATGAGTAGACAC
AGCAGCGAGCAAATAGGTCTGATAAAATACCCCCCTTCCCTTCCCTCCCCAGGAGGGAATGACTACAGGGAAGAAG
GATGGATTGATGTGGACTCATTACAGGGCCTGGAGCAGACCCCTGGTGGCCAAGACAGAAGAGATGGTTTCTGCCA
AAGATATTGCCACCTCCAGGAAATGCCAGTGAGCTGGAAGTTCCCACTATTACAAGCCATAAGGCCATGTTGCC
ATGGACACCAGAATATCTGTAGTCAGAGCACCTATCAGTTGCAAAAGCCATGCCTGCAACCGATGGAAAATGTAA
GAGGGAGTTCTTAAGGTTCTTGATGGCATCACCCAAGGCATTCTGGGAAAACCTAGGGCCTGGCCCCAAAACCTC
CCTACTCTGTGGCTAGTCTGCTGCCAACAAAATCGTAGCGACCTGGCTTTTTCACAGCTTTGCTTTTATTTCCAA
GTCAAGGACAAGCCGCTTCACTTCTGCTGGGCATTACTCTTCTGTGGTCTGTGATATTCTTGTCTTTCCAG
GGAGAATGTGCTTGGCAAGGTCTGGAGAACTAATTCAGAATCTTAGGGGAAGGGGAGAGATGGAAATACAAACCT
GCTTACTGGAAGGTGCAAAATATATGGGTTGAGCTGGAGGTAGGAATACAGGTAATTAAGGTTTCTGGTTTAAGG
GAAAACAGATCTATTGCCATTTAAATAAGGTAAGTGGGATTTGGTTAAGTTACAAAAGTTAGCAGAAGATTTATT
TACAGGCTTCACCTGTACTGTACAGGGCAAGAGAAAGCCTGGTAAACCAGCTACAGCAGTTTACCAGTGTGATGGC
TGTGACACAGCTCCACTCCACGGGTGGACACAGCAGAGGGCAACTGGGCTGGCCTGGTTTCAAGTGTGAATCAAACC
GCTTAACCCACACATGGTACATGTGATTTCTTTTGTGAGCCTTACACCAAGCCAAACTATTGTCAAAGCATCAT
TTCTATAGAAATAAAGCCTTATCTTGACCTGTTCTATTAACCAAGCAAACTATTGTCAAAGCATCAT

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FIGURE 1208

MLPCFQLLRIGGGRGGDLYTFHPPAGAGCTYRLGHRADLCDVALRPQQEPGLISGIHAELHAEPRGDDWRVSLED
HSSQGTLVNNVRLPRGHRLELSGDLLTFGPEGPPGTSPSEFYFMFQQVRVKPQDFAAITIPRSRGEARVGAGFR
PMLPSQGAPQRPLSTFSPAPKATLILNSIGSLSKLRPQPLTFSPSWGGPKSLPVPAPPGEVGTTPSAPPQRNRRK
SVHRVLAELDDESEPLENPPPVLMEPRKKLRVDKAPLTPTGNRRGRPRKYPVSAPMAPPAVGGGEPCAAPCCCLP
QEETVAWVQCDGCDVWFHVACVGCSIQAAREADFRCPGCRAGIQT

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FIGURE 1209

GGCAGCCGTCTGTGCCACCCAGAGCCGGCGGGCCGCTAGGTCCCCGGAGACCCTGCTATGGTGCGTGCGGGCGCC
GTGGGGGGCTCATCTCCCCGCGTCCGGCTTGGATATCTTCGGGGACCTGAAGAAGATGAACAAGCGCCAGCTCTAT
TACCAGGTTTTTAACTTCGCCATGATCGTGTCTTCTGCACTCATGATATGGAAAGGCTTGATCGTGCTCACAGGC
AGTGAGAGCCCCATCGTGGTGGTGCTGAGTGGCAGTATGGAGCCGGCCTTTCACAGAGGAGACCTCCTGTTCCCTC
ACAAATTTCCGGGAAGACCCAATCAGAGCTGGTGAAATAGTTGTTTTTAAAGTTGAAGGACGAGACATTCCAATA
GTTTACAGAGTAATCAAAGTTCATGAAAAAGATAATGGAGACATCAAATTTCTGACTAAAGGAGATAATAATGAA
GTTGATGATAGAGGCTTGTACAAAGAAGGCCAGAACTGGCTGGAAAAGAAGGACGTGGTGGGAAGAGCAAGAGGG
TTTTTACCATATGTTGGTATGGTCACCATAATAATGAATGACTATCCAAAATTCAAGTATGCTCTTTTGGCTGTA
ATGGGTGCATATGTGTTACTAAAACGTGAATCCTAAAATGAGAAGCAGTTCCTGGGACCAGATTGAAATGAATTC
TGTTGAAAAAGAGAAAAACTAATATATTTGAGATGTTCCATTTTCTGTATAAAAGGGAACAGTGTGGAGATGTTT
TTGTCTTGTCAAATAAAAGATTACACAGTAAAAAAAAAAAAAAAAA

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FIGURE 1210

MVRAGAVGAHLPASGLDIFGDLKKMNKRQLYYQVLNFMIVSSALMIWKGLIVLTGSESPIVVVLSGSMEPAFHR
GDLLFLTINFREDPIRAGEIVVFKVEGRDIPIVHRVIKVHEKDNGDIKFLTKGDNNEVDDRGLYKEGQNWLEKKDV
VGRARGFLPYVGMVTIIMNDYPKFKYALLAVMGAYVLLKRES

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FIGURE 1211

TCCCTGTCCTGCGCCCGCGCGCCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCC
GCCGTCCAGCCGAGTCCCCACTCCGGAGTCGCCGCTGCCGCGGGGACATGGTCCTCTGCGTTCAGGGGTGAGCAC
CCCCTTGTAAGCTCAGGGCTACTGTTGGGTGTCAGGGAACAAAGTTTTAGACTGCTGCGCTCCAAAGCGGGCACA
CACATGTACCTAGAACACACCAGCCACTGTCCCCACCATGATGATGACACAGCCATGACACACCCCTGCCCAGA
CCTCGTCCCTTTGCTGGCTGTGGAGCGGACTGGGCAGCGGCCCCCTGTGGGCCCCGTCCCTGGAAGTGGCCAAAGCCA
GTCATGCAGCCCTTGCTGCTGGGGCCTTCTCTCAGAGAGGTGGCAGAGGGTACCCAGCCAGACAGAGAGTGAG
CCAAAGGTGCTGGACCCAGAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGG
TATTGGGGTTCCATTACGGCCAGCGAGGCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGT
GACAGCACGCACCCAGCTACCTGTTACGCTGTGAGTGAACCACTCGTGGCCCCACCAATGTACGCATTGAG
TATGCCGACTCCAGCTTCCGTCTGGACTCCAAGTCTGTCCAGGCCACGCATCCTGGCCTTTCCGGATGTGGTC
AGCCTTGTGCAGCACTATGTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCACCCCG
GCCCTGCCTATGCCTAAGGAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACAC
CTAAACTGGTGCAGCCCTTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCTTGTGATCAAC
CGTCTGGTGGCCGACGTGGACTGCCTGCCACTGCCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAG
CTCTGACTGTACGGGGCAATCTGCCCCACCCTACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTT
GGGCCCCCACTGTCCCTCCTCCAGGCATCCTGGTGCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAA
GAGCAAGGCATGGGAGAGGGGAGGTGTACACAACCTTGGAGGTAAATGCCCCAGGCCGCGATGTGGCTTCATTA
TACTGAGCCATGTGTGAGAGGATGGGAGACAGGCAGGACCTTGTCTCACCTGTGGGCTGGGCCCCAACCTCCAC
TCGCTTGCCTGCCCTGGCCACCTGAACTGTATGGGCACTCTCAGCCCTGGTTTTTCAATCCCCAGGGTCGGTAGG
ACCCCTACTGGCAGCCAGCCTCTGTTTCTGGGAGGATGACATGCAGAGGAACTGAGATCGACAGTACTAGTGAC
CCCTTGTGAGGGGTAAGCCAGGCTAGGGGACTGCACAATTATACACTATTTATTTATTTATTTCTCCTTGGGGTT
GGTGTGAGGGGCAAACCAACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAAAGACCCCAACTCTGCCCTGGCT
TCTCTGGTTCTTCCCTGTGGAAGGCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCTGGTA
CTGACCCACCCCTCTGTGAATGTGTCCACTCTCTTCTGCCCCAGCCATATTTGGGGAGGATGGACAACCTACAAT
AGGTAAGAAAATGCAGCCGGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTCACCCCTCACAGGACAGAGCTGTAT
CTGCATAAAGCTGGTCTCACTGTGGCGCAGGCCCGGGGGGAGTGCTGTGCTGTCAGGAAAAGGGGGTGCTGGT
TTGAGGGCCACCCTGCAGTTCTGCTAGGTCTGCTTCCCTGCCAGGAAGGTGCCTGCACATGAAAGGAGAGAAAT
ACACGTCTGATAAGACTTCATGAAATAATAATTATAGCAAAGAACAGTTTGGTGGTCTTTTCTCTTCCACTGATT
TTTCTGTAATGAACATTATACCTTTATTACCTCTTTATTTTATTACCTCTATAATAAAATGATACCTT

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FIGURE 1212

MDTPLPRPRPLLAVERTGQRPLWAPSLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTFS
YLRESGWYWGSITASEARQHLQKMPEGTFILVRDSTHPSYLEFTLSVKTTTRGPTNVRIEYADSSFRLDSNCLSRPRI
LAFFPDVVSILVQHYVASCTADTRSDSPDPAPTPALPMPKEDAPSDPALPAPPPATAVHLKLVQPFVRRSSARSLQH
LCRLVINRLVADVDCLPLPRRMADYLRQYPFQL

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FIGURE 1213A

ATCTGCTGGCATTTCCTGCAGCCAGGCCCGCGCCGCCAGTGGAGCCCCCGCGCGCCCGGCCGGCCCGGAGCACCG
AGCTCGCGGCACGGTAGGAGAAGCCCCGAGCGCCACAGCATGAAGGAGGAGGCCTTCCTCCGGCGCCGCTTCT
CCCTGTGTCCACCTTCCTCCACCCCTCAGAAAGTCGACCCCCGGAAGCTCACCCGGAACCTTGCTCCTCAGCGGAG
ACAATGAGCTCTACCCACTCAGCCCAGGGAAGGACATGGAGCCCAACGGCCCGTCGCTGCCAGGGATGAAGGGC
CCCCGACCCCAAGCTCTGCCACGAAGGTGCCACCGGCAGAGTACAGGCTGTGCAACGGGTGAGACAAGGAATGTG
TGCCCCCACCAGCCAGGGTCACCAAGAAGGAGACTCTCAAGGCGCAGAAGGAGAACTACCGGCAGGAGAAGAAGC
GCGCCACACGGCAGCTGCTCAGCGCTCTGACAGACCCAGCGTGGTCATCATGGCTGACAGCCTGAAGATCCGCG
GCACCCCTGAAGAGCTGGACCAAGCTGTGGTGCCTGCTGAAGCCGGGGGTGCTGCTCATCTACAAGACGCCCAAGG
TGGGCCAGTGGGTGGGCACGGTGTGCTGCACTGCTGCGAGCTCATCGAGCGGCCCTCCAAGAAGGACGGCTTCT
GCTTCAAGCTCTTCCACCCGCTGGATCAGTCCGTCTGGGCCGTGAAGGGCCCCAAAGGTGAGAGCGTGGGCTCCA
TCACACAGCCCCTGCCAGCAGCTACCTGATCTTCAGGGCCGCTCCGAGTCAGATGGTCTGCTGCTGGCTGGACG
CCCTGGAGCTGGCCCTGCGCTGCTCTAGCCTACTGAGACTGGGCACCTGCAAGCCGGGGCCGAGACGGGGAGCCAG
GGACCTCGCCAGACGCATACCCCTCATCGCTCTGTGGGCTGCCAGCCTCAGCCACCGTCCACCCAGACCAAGACC
TGTTCCCACTGAACGGGTCTTCCCTGGAGAACGATGCATTCTCAGACAAGTCGGAGAGAGAGAACCCTGAGGAGT
CAGATACCGAGACCCAGGACCATAGCCGGAAGACGGAGAGTGGCAGCGACCAGTCAGAGACCCCTGGGGCCCCGG
TGCGGAGAGGGACCACTATGTGGAGCAGGTCCAGGAGGAGCTGGGGGAGCTGGGCGAGGCGTCCAGGTGGAGA
CAGTGTGAGAGGAGAACAAGAGTCTGATGTGGACCCTGCTGAAGCAGCTACGGCCAGGCATGGACCTGTCCCGCG
TGGTGTACCCACGTTCTGACTGGAGCCGCGCTCCTTCTGAACAAGCTCTCCGACTACTACTACCACGCAGACC
TGCTCTCCAGGGCTGCGGTGGAGGAGGATGCCTACAGCCGCATGAAGCTGGTGTGCGGTGGTACCTGTCTGGCT
TCTACAAGAAGCCCCAAGGGAATCAAGAAGCCGTACAACCCCATCCTGGGGGAGACCTTCCGCTGCTGCTGGTTCC
ACCCGCAGACTGACAGCCGCACATTCTACATAGCAGAGCAGGTGTCCACCACCCGCCCGTGTCTGCCTTCCACG
TCAGCAACCGGAAGGACGGCTTCTGCATCAGTGGCAGCATCACAGCCAAGTCCAGGTTTTATGGGAACCTCGCTGT
CGGCGTGTGGACGGCAAAGCCACGCTCACCTTCCTGAACCGAGCCGAGGATTACACCTTACCATGCCCTACG
CCCACTGCAAAGGAATCCTGTATGGCACGATGACCCCTGGAGCTGGGTGGGAAGGTCACCATCGAGTGTGCGAAGA
ACAACCTCCAGGCCCAGCTGGAATTCAAACCTCAAGCCCTTCTTCGGGGGTAGCACCAGCATCAACCAGATCTCGG
GAAAGATCACGTCGGGAGAGGAAGTCTTGGCGAGCCTCAGTGGCCACTGGGACAGGGACGTGTTTTATCAAGGAGG
AAGGGAGCGGAAGCAGTGCCTTTTTCTGGACCCGAGCGGGGAGGTCCGCAGACAGAGGCTGAGGCAGCACACGG
TGCCGCTGGAGGAGCAGACGGAGCTGGAGTCCGAGAGGCTCTGGCAGCACGTACACAGGGCCATCAGCAAGGGCG
ACCAGCACAGGGCCACACAGGAGAAGTTTGCCTGAGGAGGACACAGCGGCAGCGGGCCCGTGAAGCGGCAGGAGA
GCCTCATGCCCTGGAAGCCGCAGCTGTTCCACCTGGACCCCATCACCCAGGAGTGGCACTACCGATACGAGGACC
ACAGCCCCTGGGACCCCTGAAGGACATCGCCCAAGTTTGAAGCAAGACGGGATCCTGCGGACCTTGACAGCAGGAGG
CCGTGGCCCGCCAGACCCTTCTTGGGCAGCCAGGGCCAGGCACGAGAGGTCTGGCCAGACCAGCGGCTTC
GCAAGGCCAGCGACACCCCTCCGGCCACAGCCAGGCCACGGAGAGCAGCGGATCCACGCCTGAGTCTGCCAG
AGCTCTCAGACGAGGAGCAGGATGGTGACTTTGTCCCTGGCGGTGAGAGCCCATGCCCTCGGTGCAGGAAGGAGG
CGCGCGGCTGCAGGCCCTGCACGAGGCCATCCTCTCCATCCGAGAGGCCCAGCAGGAGCTGCACAGGCACCTCT
CGGCCATGCTGAGCTCCACGGCACGGGCAGCACAGGCACCGACCCAGGCCTCCTGCAGAGCCCCCGATCCTGGT
TCCTGCTCTGCGTGTTCCTGGCGTGTGAGCTGTTTCAATTAACCATCCTCAAATAGGAGCCCTGGGGGCGAGAGCT
CCTGGCCAGTCCCAGGCCCTCCCTCCCAGGCACCCAGCACTTTAAGCCTGCTCCATGGAGGCAGAGAGGCCCGGC
AAGCACAGCCACTGTGACGGGGAGTCCAGGCGCAGGAGGGACCCGGGGCCACAAGGCGCTGCGGGCCAGGTGTG
CTGGGCCCCCTCTCAGGGGCACTGGCCTCTCTGCAGGGCCTTCCGCCCAGCGCTGGCCTTAATGCTAAAGCCAAAT
GCAGCTTCTGCTGTGCGACGCACTCCTGGCCATCTTGCCGTGTACCCCTGTCCGGCCTCCACTTGCCATGGGG
GATGGATGGATTTAGGGTGGGAGGGCCTGTGGGGGCCCTGGACAGTCACACCCAGCAGCAGTGAAGTGGGCAGGT
TTGGAGGAGCAGCCAGGGAGCCCCGAGTGGCCCAGGAGTCCCCCACACACAGATGCATAGGCCTGCCTTCCGGA
GACCTGTCCACATTGCCGGGACCACTTGGTGGGGCCACTGGTGGGTGCCAGGGACAGGTTAGGGCCACTCTGG
GGAAGGCATTTTGGTTTTTTTATTCCACGCTGTGCTGTTTGGATGGGAGCCCCACAGAGGCAGGTCTGGAACCAC
CCCACCCACACCTGGACGCTCGCTCTGGTGGGGGCACACGCAGGTGGAGGTGGTTGTGGGTGCAGGTGTGTGC
AGGGGTGTGGGGGGCGCAGGGGTGTGGCTTAGCTGGCCCCGCACCCAGGCCGGGGAGGCTCAAGTTCGCCACTTT
ACTCAGACCGATGCACAGTCTTCCATTTTACACTTTTTTAATAAACATAATTGCAATATTTAGGTGGGCTGCG

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FIGURE 1213B

AGCTGCAGTCAGCCTTCACGTCTGGCCTCAGTCCCCGTGTCAGTGCCGCTCTGCGTGTGCGTGTGCGCGTGTGTG
AGCCTCTACACATATATATACGTACAGAGCCTTAAACCACATCGTGGCGGTGCCGTCTGAGCTGTAGCGGGTGGC
TTTGTTTCCAGTTTTTGTACCCGTGTCCTTGTCTCCCCCTCCTCCCCATCTGGGGATGTGTCTGTGTTCCACACC
TTGAAATAAACAGACACATACGTGTTCTCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1214

MKEEAFLLRRRFSLCPPSSSTPQKVDPRKLTRNLLLSGDNELYPLSPGKDMEPNGPSLPRDEGPPTPSSATKVPPAE
YRLCNGSDKECVSPTARVTKKETLKAQKENYRQEKKRATRQLLSALTDPSVVIMADSLKIRGTLKSWTKLWCVLK
PGVLLIYKTPKVGQWVGTVLLHCCELIERPSSKKGDFCFKLFHPLDQSVWAVKGPKGESVGSITQPLPSSYLIFRA
ASESDGRCWLDALELALRCSSLLRLGTCKPGRDGEPGTSPDASPSSLCGLPASATVHPDQDLFPLNGSSLEND AF
SDKSERENPEESDTETQDHSRKTESGSDQSETPGAPVRRGTTYVEQVQEELGELGEASQVETVSEENKSLMWILL
KQLRPGMDLSRVVLP TFVLEPRSFLNKLSDYYYHADLLSRAAVEEDAYS RMKLVLRWYLSGFYKKPKGIKKPYNP
ILGETFRCCWFHPQTDSRTFYIAEQVSHHPPVSAFHVSNRKDGFCSIGSITAKSRFYGNLSALLDGKATLTFLN
RAEDYTTLTPYAHCKGILYGTMTLELGGKV TIECAKNNFQAQLEFKLPFFGGST SINQISGKITSGEEVLASLS
GHWDRDVF IKEEGSGSSALFWTPSGEVRRQRLRQHTVPLEEQTELESERLWQHVTRAISKGDQHRATQEKFALEE
AQRQRARERQESLMPWKPQLFHLDPITQEWHYRYEDHSPWDPLKDIAQFEQDGILRTLQQEAVARQTTFLGSPGP
RHERSGPDQRLRKASDQPSGHSQATESSGSTPESCPELSDEEQDGD FVPGGESPCPRCRKEARRLQALHEAILS I
REAQQELHRHLSAMLSSTARAAQAPT PGLLQSPRSWFLLCVFLACQLFINHILK

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FIGURE 1215

GAATCTCTCGCGGGCAGCAGGGCGCGCGCTGCACGCACAGTACTAGGTCAGGTGGTGCTCCCGGGTGAGGAGCTG
CTCCTGCCGGAACAGGAGGACGCGGAAGGCCCTGGGGGTGCAGTGGAGCGACCGTTGAGCCTGAATGCTAGAGCG
TGCTCGCGGGTGCGCGTTTGTATGCGGTCCGGGCCTTCGACGCTGTGGGGACCGCCTGCTGGTCACCAAGTGCGG
CCGCCTCCGTCAACAAGGAGCCCGGCAGTGGAGGCGGCGGGCGGTGTTTACTGGGTGGACTCTCAGCAGAAGCGGTA
TGTTCCAGTAAAAGGAGACCATGTGATTGGCATAGTGACAGCTAAATCTGGAGATATATTCAAAGTTGATGTTGG
AGGGAGTGAGCCAGCTTCTTTGTCTTACTTGTCAATTTGAAGGTGCAACTAAAAGAAACAGACCAAATGTGCAGGT
TGGAGATCTCATCTATGGCCAGTTTGTGGTTGCTAATAAAGACATGGAACCAGAGATGGTCTGTATTGACAGCTG
TGGACGAGCCAATGGAATGGGTGTCATTGGACAGGATGGTCTGCTTTTTAAAGTGACTCTGGGCTTAATTAGAAA
GCTATTAGCTCCAGATTGTGAAATCATAACAGGAAGTGGGAAAACCTCTATCCACTGGAGATAGTATTTGGAATGAA
TGGAAGAATATGGGTTAAGGCAAAAACCATCCAGCAGACTTTAATTTTGGCAAACATTTTAGAAGCTTGTGAACA
CATGACGTCAGATCAAAGAAAACAGATCTTCTCCAGATTGGCAGAAAAGTTGATATAGGTGGACTTTTTTACAGGT
CAGTTGAGGCAAAAACTATGGGTTTTTTTCAGGTGAACCTCCCCATTTAAATACTCAGAAGATAAGGTGTGAAT
GTATGTATTATTAGAGTCCGAAAGTATTTTTATAAGTTACTGGTTTTACCCACGCTTTTGTGGGAGAGAAAATC
ATTGCAAAATCATTTTTTTTTGTTTCGGTACAATAAAGTTTACTAAAAAACAAA

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FIGURE 1216

MLERARGCAFVCGPGLRRCGDRLLVTKCGRRLRHKEPGSGGGGGVYWVDSQQKRYVPVKGDHVGIVTAKSGDIFK
VDVGGSEPASLSYLSFEGATKRNRPNVQVGDLIYGQFVANKDMEPEMVCIDSCGRANGMGVIGQDGLLFKVTLG
LIRKLLAPDCEIIQEVGKLYPLEIVFGMNGRIWVKAKTIQQTLILANILEACEHMTSDQRKQIFSRLAES

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FIGURE 1217

GGATTTTCCTTGGTCTTAAGATGGGTAGAAATGTGATGCGACACATGTCTGATGACTTAGGAAAGTTATGTTTCTC
TTTCGTGTGATGACTTTTCTTCACAGGAATTAGAGATTTTCATTTGCTCCTTTTCTCCTCCTGGCTTCAAATGT
TTGTTGCAGAGGCAGTCTTTAAAAAGTTGTGTCTACAGAGCTCTGGCAGTGTTTCTTCTGAGCCACTCTCTCTTC
AGAAAATGGTATATTCTATTTACCAGCCTTGGGGAAAACCTGGTGTGCTTGGGTCTGGAAAAGATTCAAGGTGTCAA
AGAAAATAGGACAGCGCCTTGTGTTTACTCTCAGAGAACCTTACTAATGCTGAATGGTACTAAACAAAAACAAG
TCGAAGGGCTGCCAGAGTTACTAGACCTGAACCTTGCTAAATGTTCTCATCATTAAAAAATTGAAAAAGAAGT
CAGAAGGAGAATTGTCATGTTCCAAGGAGAATTGCCCTCTGTAGTTAAAAAGATGAATTTTCACAAGACTAATC
TAAAAGGAGAAACAGCCCTGCATAGAGCTTGCTAAATAACCAAGTGGAGAAATTGATTCTTCTTCTCTCTTTGC
CAGGAATAGACATCAATGTTAAAGACAATGCTGGCTGGACGCCTTTGCATGAAGCCTGTAAGTATGGCAACACAG
TGTGTGTCCAGGAAATTTTGCAACGTTGTCCAGAGGTAGATCTGCTCACTCAAGTGGACGGGGTGACTCCTTTGC
ATGATGCACTGTCAAACGGACATGTAGAAATTGGCAAGCTGCTACTACAGCATGGGGGCCAGTGCTTTTACAAC
AGAGGAATGCTAAGGGAGAATTGCCCTTGGATTATGTGGTTTACCTCAAATCAAAGAAGAACTGTTTGCTATTA
CAAAAATAGAAGATACAGTGGAGAACTTTTCATGCACAAGCAGAGAAACATTTTCATTACCAGCAACTTGAATTTG
GCTCCTTTTTACTTAGTAGGATGTTGCTAAATTTTGTTCATTTTGTATTTATCTTCAGAGTTCAATTTAGCTT
CCAAAGGGTTAACTCATCTAAATGAAGTCTTATGGCTTGTAAGTGCATAAAGAAACCACCAGTGTTTCATACTG
ACTGGTTACTGGATCTTTATGCTGGAAATATAAAGACATTGCAGAACTCCACACATTCTTAAGGAACTGCCTG
AGAATTTGAAAGTGTGTCCTGGGGTACACACTGAGGCCTTGATGATAACATTGGAAATGATGTGTCGGTCAGTCA
TGGAGTTTTCTATGATGCTAGAAAGTATGGATTGACTTTCTAAATCTGTTTCAGTTTGCATTGGTACTTACTGT
GGACTTCATAGCTTACTGACAGATAGTAATTTGATTTATTTATTGACAGACTTTGCAGCCTTGCTAAATTTTAAA
AGCATTTTTAAAAAACTTCTACAAAACCTCTAGTATGGGCTTCTGACTTTTTCCAGGGGTGTAGAATTTGACTCAA
AAGTAAAAATAATTTTGTGTTTAGTATATTCTACTTTTATTAATGTTTTTTTGTCTGAAAGTGATATTATATTGT
ACATGTAAAAATTAATTTAAATATTTTTTCAAATAAAAATGTAATGTCCTGTAAAAA

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FIGURE 1218

MGRNVMRHMSDDLGSYVSLSCDDFSSQELEIFICSFSSSWLQMFVAEAVFKKLCLOSSGSVSSEPLSLQKMVYSY
LPALGKTGVLGSGKIQVSKKIGQRPCFDSQRTLLMLNGTKQKQVEGLPELLDLNLAKCSSSLKKLKKKSEGELSC
SKENCPSVVKMNFHKTNLKGETALHRACINNQVEKLILLLSLPGIDINVKDNAGWTPLHEACNYGNTVCVQEIL
QRCPEVDLLTQVDGVTPLDALSNHGVEIGKLLQHGGPVLLQQRNAKGELPLDYVVSPQIKEELFAITKIEDTV
ENFHAQAEKHFHYQQLEFGSFLLSRMLLNFCISIFDLSSEFILASKGLTHLNELLMACKSHKETTSVHTDWLLDLY
AGNIKTLQKLPHILKELPENLKVCPGVHTEALMITLEMMCRSVMEFS

[illegible]

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FIGURE 1220

MPAERPAGSGGSEAPAMVEQLDTAVITPAMLEEEEQLEAAGLERERKMLEKARMSWDRESTEIRYRRLQHLLKS
NIYSKFLLTKEQQQLEEQKKKEKLERKKESLKVKKGKNSIDASEEKPVMRKKRGREDESYNISEVMSKEEILSV
AKKNKKENEDENSSSTNLCVEDLQKNKDSNSIIKDRLSETVRQNTKFFFDVPVRKCNGQPVPFQQPKHFTGGVMRW
YQVEGMEWLRMLWENGINGILADEMGLGKTVQCIATIALMIQRGVPGPFLVCGPLSTLPNWMAEFKRFTPDIPM
LYHGTQEERQKLVRNIYKRKGTLQIHPVVITSFEIAMRDRNALQHCYWKYLIVDEGHRIKNMKCRLIRELKRFNA
DNKLLLTGTPLQNNLSELWSLLNFPDVFDDLKSFESWFDITSLSETAEDIIAKEREQNVLMHLHQILTPFLLR
RLKSDVALEVPPKREVVVYAPLSKKQEIFYTAIVNRTIANMFGSSEKETIELSPTGRPKRRTRKSINYSKIDDFP
NELEKLISQIQPEVDRERAVVEVNIPVESEVNLKLQNIMLLRKCCNHPYLIIEYPIDPVTQEFKIDEELVTNSGK
FLILDRMLPELKKRGHKVLLFSQMTSMLDILMDYCHLRDFNFSRLDGSMYSEREKNMHSFNTDPEVFIFLVSTR
AGGLGINLTAADTVIIYDSWNPQSDLQAQDRCHRIGQTKPVVVYRLVTANTIDQKIVERAAAKRKLEKLIHKN
HFKGGQSGNLNLSKNFLDPKELMELLKSRDYEREIKGSREKVISDKDLELLLDLDRSDLIDQMNASGPIKEKMGIFKI
LENSEDSSPECLF

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FIGURE 1222

MQGTWLPPSFLAVCDTEEVSLFLELCFKIHVTCKAVLICDYGPMELGQSLWEAEGKDPGHFR

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FIGURE 1223

CCCTTTAAAGGGTGACTCGTCCCACTTGTGTTCTCTCTCCTGGTGACAGTTGCAAGCAAGTTTATCAGAGTATC
GCCATGAAGTTTCGTCCCCCTGCCTCCTGCTGGTGACCTTGTCTGCTGGGGACTTTGGGTACAGCCCCGAGGCAA
AAGCAAGGAAGCACTGGGGAGGAATTCCATTTCCAGACTGGAGGGAGAGATTCTGCACTATGCGTCCCAGCAGC
TTGGGGCAAGGTGCTGGAGAAGTCTGGCTTCGCGTCGACTGCCGCAACACAGACCAGACCTACTGGTGTGAGTAC
AGGGGGCAGCCCAGCATGTGCCAGGCTTTTGTCTGCTGACCCCAAACCTTACTGGAATCAAGCCCTGCAGGAGCTG
AGGCGCCTTCACCATGCGTGCCAGGGGGCCCCGGTGCTTAGGCCATCCGTGTGCAGGGAGGCTGGACCCCAGGCC
CATATGCAGCAGGTGACTTCCAGCCTCAAGGGCAGCCCAGAGCCCAACCAGCAGCCTGAGGCTGGGACGCCATCT
CTGAGGCCCAAGGCCACAGTGAACTCACAGAAGCAACACAGCTGGGAAAGGACTCGATGGAAGAGCTGGGAAAA
GCCAAACCCACCCGACCCACAGCCAAACCTACCCAGCCTGGACCCAGGCCCGGAGGGAATGAGGAAGCAAAG
AAGAAGGCCTGGGAACATTGTTGAAACCCCTCCAGGCCCTGTGCGCCTTTCTCATCAGCTTCTTCCGAGGGTGA

CAGGTGAAAGACCCCTACAGATCTGACCTCTCCCTGACAGACAACCATCTCTTTTTATATTATGCCGCTTTCAAT
CCAACGTTCTCACACTGGAAGAAGAGAGTTTCTAATCAGATGCAACGGCCCAAATTCTTGATCTGCAGCTTCTCT
GAAGTTTGAAAAAGAAACCTTCCTTTCTGGAGTTTGCAGAGTTCAGCAATATGATAGGGAACAGGTGCTGATGGG
CCCAAGAGTGACAAGCATAACAATACTTATTATCTGTAGAAGTTTTGCTTTGTTGATCTGAGCCTTCTATGAA
AGTTTAAATATGTAACGCATTTCATGAATTTCCAGTGTTTCAGTAAATAGCAGCTATGTGTGTGCAAAATAAAAGAA
TGATTTCAGAAAT

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FIGURE 1224

MKFVPCLLLVTLSCLGTLGQAPRQKQGSTGEEFHFQTGGRDSCTMRPSSLGQGAGEVWLRVDCRNTDQTYWCEYR
GQPSMCQAFADPKPYWNQALQELRRLHHACQGAPVLRPSVCREAGPQAHMQQVTSSLKGSPEPNQQPEAGTPSL
RPAKATVKLTEATQLGKDSMEELGKAKPTTRPTAKPTQPGPRPGGNEEAKKKAWEHWCWKPQALCAFLISFFRG

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FIGURE 1225

GTCTACACCCCTCCTCACACGCACTTCACCTGGGTCGGGATTCTCAGGTCATGAACGGTCCCAGCCACCTCCGG
GCAGGGCGGGTGAGGACGGGGACGGGGCGTGTCCAACCTGGCTGTGGGCTCTTGAAACCCGAGCATGGCACAGCAC
GGGGCGATGGGCGCGTTTCGGGGCCCTGTGCGGCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGTACGCGCCCCACC
GGGGGTCCCGGGTGCGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGCCGGGTTCACACG
ACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCCGAGTGGGACTGCATGTGTGTCCAGCCTGAATTC
CACTGCGGAGACCCCTTGCTGCACGACCTGCCGGCACCAACCTTGTCCTCCAGGCCAGGGGGTACAGTCCCAGGGG
AAATTTCAGTTTTGGCTTCCAGTGTATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAAGGCCACTGCAAA
CCTTGACAGACTGCACCCAGTTCGGGTTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAACGCTGTGTGCGTC
CCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCCTGCGTCCTCCTC
CTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGAGAGACCCAGCTG
CTGCTGGAGGTGCCGCCGTGACCGAAGACGCCAGAAGCTGCCAGTTCCCCGAGGAAGAGCGGGGCGAGCGATCG
GCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTGTGAGCCTGGCCGTCTCCGGGGCCACCGACCGCAGCCAG
CCCCCCCCAGGAGCTCCCCAGGCCGCAGGGGCTCTGCGTTCTGCTCTGGGCCGGGCCCTGCTCCCCTGGCAGCA
GAAGTGGGTGCAGGAAGGTGGCAGTGACAGCGCCCTGGACCATGCAGTTCGGCGGCCGCGGCTGGGCCCTGCAG
GAGGGAGAGAGAGACACAGTCATGGCCCCCTTCCTCCCTTGCTGGCCCTGATGGGTGGGGTCTTAGGACGGGAG
GCTGTGTCCGTGGGTGTGCAGTGCCAGCACGGGACCCGGCTGCAGGGGACCTTCAATAAACACTTGTCCAGTGA
AAAAAAAAAAAAAA

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FIGURE 1226

MAQHGAMGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLGTGTDARCCRVHTTRCCRDYPGEECCSEWDCMCV
QPEFHCGDPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWTCTQFGFLTVPGNKTHN
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLSAQLGLHIWQLRSQCMWPRETQLLLEVPPSTEDARSCQFPEER
GERSAEKGR LGDLWV

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FIGURE 1227

CGCCCGCGCGCCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCGCCGTCCAGCC
GAGTCCCCACTCCGGAGTCGCCGCTGCCGCGGGGACATGGTCCCTCTGCGTTCAGGGACCTCGTCCTTTGCTGGCT
GTGGAGCGGACTGGGCAGCGGCCCTGTGGGCCCCGTCCCTGGAAGTGCCCAAGCCAGTCATGCAGCCCTTGCCT
GCTGGGGCCTTCCCTCGAGGAGGTGGCAGAGGGTACCCAGCCCAGACAGAGAGTGAGCCAAAGGTGCTGGACCCA
GAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGGTATTGGGGTTCCATTACG
GCCAGCGAGGCCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGTGACAGCACGCACCCACG
TACCTGTTTCACGCTGTCACTGAAAACCACTCGTGGCCCCACCAATGTACGCATTGAGTATGCCGACTCCAGCTTC
CGTCTGGACTCCAAGTGTGTCCAGGCCACGCATCCTGGCCTTTCCGGATGTGGTCAGCCTTGTGCAGCACTAT
GTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCCACCCCGGCCCTGCCTATGCCTAAG
GAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACACCTAAAGTGGTGCAGCCC
TTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCCTTGTCAATCAACCGTCTGGTGGCCGACGTG
GACTGCCTGCCACTGCCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAGCTCTTGACTGTACGGGGCA
ATCTGCCCCACCTCACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTTGGGCCCCCACTGTCCCTC
CTCCAGGCATCCTGGTGCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAAGAGCAAGGCATGGGAGAG
GGGAGGTGTACACAACCTTGGAGGTAAATGCCCCCAGGCCGCATGTGGCTTCATTATACTGAGCCATGTGTCAGA
GGATGGGGAGACAGGCAGGACCTTGTCTCACCTGTGGGCTGGGCCCAGACCTCCACTCGCTTGCCTGCCCTGGCC
ACCTGAACTGTATGGGCACTCTCAGCCCTGGTTTTTCAATCCCCAGGGTCGGGTAGGACCCCTACTGGCAGCCAG
CCTCTGTTTCTGGGAGGATGACATGCAGAGGAAGTGAATCGACAGTGAAGTGAAGCCCTTGTGAGGGGTAAG
CCAGGCTAGGGGACTGCACAATTATACACTATTTATTTATTTATTTCTCCTTGGGGTTGGTGTGAGGGGCGAGCCA
ACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAGAGACCCCAACTCTGCCCTGGCTTCTCTGGTTCTTCCCTGT
GGAAAGCCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCCTGGTACTGACCCACCCGTCTGTG
AATGTGTCACTCTCTTCTGCGCCCAGCCATATTTGGGAGGATGGACAACCTACAATAGGTAAGAAAATGCAGCC
GGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTACCCCTCACAGGACAGAGCTGTATCTGCATAGAGCTGGTCTC
ACTGTGGCGCAGGCCCC

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FIGURE 1228

MVLCVQGPRPLLAVERTGQRPLWAPSLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTF
YLRESGWYWGSITASEARQHLQKMPEGTFLVRDSTHPSYLF T LSVKTTTGPTNVRIEYADSSFR L DSNCLSRPRI
LAFPDVVSLVQHYVASCTADTRSDSPDPAPT PALPMPKEDAPSDPALPAPPPATAVHLKLVQPFVRRSSARSLQH
LCRLVINRLVADVDC L PLPRRMADYLRQYPFQL

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FIGURE 1229

GGCACGAGGGTTCCCGCCAGGTCCGTGCCGGGCGAGAGAGATGCTGCCCGGCCCGCCTCGGCTTTGAGGCGAGAG
AAGTGTCCCAGACCCATTTGCGCTTGCTGACGGCGTCGAGCCCTGGCCAGACATGTTCCACAGGGTTCTCCTTCGG
GTCCGGGACTCTGGGCTCCACCACCGTGGCCGCCGGCGGGACCAGCACAGGCGGCGTTTTCTCCTTCGGAACGGG
AGCGTCTAGCAACCCTTCTGTGGGGCTCAATTTTGGAATCTTGGAAGTACTTCAACTCCAGCAACTACATCTGC
TCCTTCAAGTGGTTTTTGGAACCGGGCTCTTTGGATCTAAACCTGCCACTGGGTTCACTCTAGGAGGAACAAATAC
AGGAATAGCAACAATACTATACTACAGGATTAACCTCTGGGAACGCCAGCCACTACATCTGCAGCTACAACAGGCTT
CAGTTTAGGATTCAATAAACCTGCAGCATCTGCCACACCATTTGCTCTACCTATTACCTCTACCTCAGCTAGCGG
TCTGACTCTTTCTGCTCTGCTCTGACATCAACTCCAGCAGCATCCACAGGATTTACTCTAAATAATTTGGGTGGGAC
AACAGCCACAATACTACAATGCATCAACAGGCCTCTCTTTAGGGGGAGCCTTAGCTGGTTTTGGGAGGTTCACTTTT
CCAGAGTACAAACACAGGAACATCAGGACTTGAGACAGAATGCTTTAGGGTTGACTTTGGGAATACTACAGCAGCTAC
TTCAACTGCAGGCAATGAAGGCCTTGGTGGTATAGATTTCACTAGCTCCTCAGATAAAAAGAGTGATAAAACGGG
AACAAGACCAGAGGATAGTAAAGCTCTGAAGGATGAAAACTACCTCCTGTCTATCTGCCAGGATGTTGAAAACTC
CCAGAAATTTGTGAAGGAGCAGAAACAAGTTCAAGAAGAAATAGTAGAATGTCTTCAAAGCAATGCTTAAGGT
ACAAGAAGATATTAAAGCTCTGAAGCAGCTCCTGTCTGGTGGCTGCCAATGGAATACAGAGAAACACTCTCAACAT
TGACAAATTTGAAAATAGAACTGCTCAGGAGTTGAAGAATGCTGAAATAGCTTTAAGAACCCAGAAGACACCACC
TGGACTTCAACATGAATATGCAGCTCCTGTCTGACTACTTCAGAATCTTGGTTCAGCAATTTGAGGTACAGCTTCA
GCAGTACAGGCAGCAGATTGAAGAACTAGAAAACCATCTTGCCACTCAAGCAAATAATTCACATATAACCCCTCA
AGATTTGTCAATGGCTATGCAGAAAATTTATCAAACATTTGTAGCTTTAGCGGCACAACCTTCAGTCTATTTCATGA
AAATGTAAAGGTTCTGAAAGAACAGTACCTTGGCTACAGGAAAATGTTCTTGGGAGATGCTGTTGATGTGTTTGA
AACAAGGCGAGCAGAAGCCAAGAAGTGGCAGAACACACCCAGAGTTACTACTGGACCCACTCCTTTTCAGCACCAT
GCCAAACGCAGCAGCCGTTGCCATGGCTGCAACACTTACACAGCAGCAACAGCCTGCTACAGGGCCACAGCCATC
TCTGGGAGTTAGTTTTGGAACGCCATTTCGGCTCAGGTATTGGCACTGGCTTGCAATCAAGTGGCTTAGGTTCTTC
AAACCTTGGAGGATTTGGAACCTAGCTCTGGTTTTGGATGCAGCACCACAGGGCCTCCACATTTGGATTTGGAAC
AACAAATAAACCCCTCAGGAAGTCTTAGTGCAGGCTTTGGCAGCTCAAGTACATCTGGGTTTAACTTCAGCAATCC
TGGCATCACGGCATCAGCTGGTTTTGACTTTTGGGGTGTCCAATCCTGCCCTCTGCAGTTTTGGAACAGGAGGACA
ACTCCTTCAGTTGAAGAAACCTCCAGCTGGAAACAAAAGAGGAAAAAGATATAACATGGGTTGATGTGTTGAGAGA
ATCCATAGCAGCACCCTTCATTCTATGAGTCTATTTTTCTAATGATGCAGTAATTAAATTGCATCCCAGGAGATT
TATAAGTTTTGATATTTTTCCCTACTCTGGAATTTGAACCTTTCTTCATGTTTGCCATACTGAACATCTTTTTTC
TTGTGGAATTTAAAGTCCAGCTGTGTTTTCTTTTTAATTTGATTCTCAGTGTAAAGAAATGTTCTGATTACATCAC
TGATTGGTAATGGTTAGAAAACCATTAACCTAAAACCTTACTATTTAACCTAGTGTTTTTGTTGATGAGGTTTACAT
TATGTGAATACATGCACATTTGTTTCTTATACAGGTGGTGTGAACCTTAGGGCCTATACTAGAATCAATTTGTTT
CTTGTTAAAGGCCTTTTGAATTATACTGCAGGGCATCTTGTGAATATGTATGTAAATATATACAGAATAATACAC
ACAGTTGTGTGTGCATATAAAATACATATTTACGCCAGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCAGGCGGATCACCTGAGGTCAGGAGTTTGAGACCAGCCTGACATGGTGAAACCCCATCTCTACGAA
AAATACAAAAATTAGCTGGGCATAGTGGCGGGTACCTATAATCCCAGCTACTCGGGAGGCTGAGGCACGAGAATC
ACTTGAAGCCGGGAGGTGGGGGTTCAGTGAGCCGAGATCACACCACTGCACTCCAGCCTGGGCAACAAGAGCAA
AACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1230

MSTGFSFGSGTLGSTTVAAGGTSTGGVFSFGTGASSNPSVGLNFGNLGSTSTPATTSA
PSSGFGTGLFGSKPATG
FTLGGTNTGIATTTTGLTLGTPATTSAATTGFSLGFNKPAASATPFALPITSTSASGLTLSSALTSTPAASTGF
TLNNLGGTTATTTTASTGLSLGGALAGLGGSLFQSTNTGTSGLGQNALGLTLGTTAATSTAGNEGLGGIDFSSSS
DKKSDKTGTRPEDSKALKDENLPPVICQDVENLQKFVKEQKQVQEEISRMSKAMLVQEDIKALKQLLSLAANG
IQRNTLNIDKLKIETAQELKNAEIALRTQKTPPGLQHEYAAPADYFRILVQQFEVQLQQYRQQIEELENHLATQA
NNSHITPQDLSMAMQKIYQTFVALAAQLQSIHENVKVLKEQYLG YRKMFLGDAVDVFETRRAEAKKWQNTPRVTT
GPTPFSTMPNAAVAMAATLTQQQQPATGPQPSLGVSFGTFFGSGIGTGLQSSGLGSSNLGGFGTSSGFGCSTTG
ASTFGFGTTNKPSGSLSAGFGSSSTSGFNFSNPGITASAGLTFGVSNPASAGFGTGGQLLQLKKPPAGNKRGR

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FIGURE 1231

TTTTCGAGACCGGAAGTGAGTGATCGAAAGCATGGCGTCGGTGGTGTGGCGCTGAGGACCCGGACAGCCGTTAC
ATCCTTGCTAAGCCCCACTCCGGCTACAGCTCTTGCTGTCAGATACGCATCCAAGAAGTCGGGTGGTAGCTCCAA
AAACCTCGGTGGAAAGTCATCAGGCAGACGCCAAGGCATTAAGAAAATGGAAGGTCACATATGTTTCATGCTGGGAA
CATCATTGCAACACAGCGCCATTTCCGCTGGCACCCAGGTGCCCATGTGGGTGTTGGGAAGAATAAATGTCTGTA
TGCCCTGGAAGAGGGGATAGTCCGCTACACTAAGGAGGTCTACGTGCCTCATCCAGAAACACGGAGGCTGTGGA
TCTGATCACCAGGCTGCCCCAAGGGTGCTGTGCTCTACAAGACTTTTGTCCACGTGGTTCCTGCCAAGCCTGAGGG
CACCTTCAAACCTGGTAGCTATGCTTTTGATGTCTCTGTTGAGGCCATCGGACAGAGACTGGAGCCCAGGTGACAGGA
GATGGTGATACCAGAAGTCAAGGGTTGGGGTGGCGACACGGCCTCCCGAGGAAGAGGTCTGCTTGATGGTGACTC
TGCAGGAGACTCTGAAGTGACTGCTGGGAAACCCTTTGGGAGACCTGACCTGGGGCCAAAAATAAAGTGAGCCAG
CGTCATGAACGCATGCTATTTAGGGACAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1232

MASVVLALRTRTAVTSLLSPTPATALAVRYASKKSGGSSKNLGGKSSGRRQGIKKMEGHYVHAGNIIATQRHFRW
HPGAHVGVGKNKCLYALEEGIVRYTKEVYVPHPRNTEAVDLITRLPKGAVLYKTFVHVVPKPEGTFLVAML

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FIGURE 1233

CCCGAGCCCCGCCCCCTCCGGGCCCCGGGTCGGCGCGCCAGCCTGCCAGCCGCGCTGCTGCTGCTCCTCCTGCTGT
GGGACCGCTGACCGCGCGGCTGCTCCGCTCTCCCCGCTCCAAGCGCCGATCTGGGCACCCGCCACCAGCATGGAC
GCTCGCCGCGTGCCGCAGAAAGATCTCAGAGTAAAGAAGAACTTAAAGAAATTCAGATATGTGAAGTTGATTTCC
ATGGAAACCTCGTCATCCTCTGATGACAGTTGTGACAGCTTTGCTTCTGATAATTTTGCAAACACGAAACCTAAA
TTCAGGTCAGATATCAGTGAAGAACTGGCAAGTGTTTTTTATGAGGACTCTGATAATGAATCTTTCTGCGGCTTT
TCAGAAAGTGAGGTGCAAGATGTATTAGACCATTGTGGATTTTTACAGAAACCAAGGCCAGATGTCCTAACGAA
CTGGCCGGTATTTTTTCATGCCGACTCTGACGATGAATCATTTTTCGGGTTTCTCAGAGAGTGAGATACAAGATGGA
ATGAGGCTGCAGTCAGTTCCGGGAAGGCTGTAGGACCCGCGAGCCAGTGCAGGCACTCTGGACCTCTCAGGGTGGCG
ATGAAGTTTCCAGCGCGGAGTACCAGGGGAGCAACCAACAAAAAGCAGAGTCCCGCCAGCCCTCAGAGAATTCT
GTGACTGATTCCAACCTCCGATTCAGAAGATGAAAGTGGAATGAATTTTTTGAGAGAAAAGGGCTTTAAATATAAG
CAAAACAAAGCAATGCTTGCAAAACTCATGTCTGAATTAGAAAGCTTCCCTGGCTCGTTCCGTGGAAGACATCCC
CTCCAGGCTCCGACTCACAATCAAGGAGACCGCGAAGGCGTACATTCCCGGGTGTTGCTTCCAGGAGAAACCCT
GAACGGAGAGCTCGTCTCTTACCAGGTCAAGGTCCCGGATCCTCGGGTCCCTTGACGCTCTACCCATGGAGGAG
GAGGAGGAAGAGGATAAGTACATGTTGGTGAGAAAGAGGAAGACCGTGGATGGCTACATGAATGAAGATGACCTG
CCCAGAAGCCGTCGCTCCAGATCATCCGTGACCTTCCGCATATAATTGCCCCAGTGGAAGAAATTACAGAGGAG
GAGTTGGAGAACGTCTGCAGCAATTCTCGAGAGAAGATATATAACCGTTCACTGGGCTCTACTTGTCTCATCAATGC
CGTCAGAAGACTATTGATACCAAAACAACTGCAGAAACCCAGACTGCTGGGGCGTTTCGAGGCCAGTTCTGTGGC
CCCTGCCTTCGAAACCGTTATGGTGAAGAGGTGAGGGATGCTCTGCTGGATCCGAACGGCATTGCCCGCCTTGT
CGAGGAATCTGCAACTGCAGTTTCTGCCGGCAGCGAGATGGACGGTGTGCGACTGGGGTCCCTGTGTATTTAGCC
AAATATCATGGCTTTGGGAATGTGCATGCCTACTTGAAAAGCCTGAAACAGGAATTTGAAATGCAAGCATAATAT
CTGGAAAATTTGCTGCCTGCCTTCTACTTCTCAAATCTTTCTTGTAAGGTTTCCAATTTTTTCACTGAAACCTG
AGTTAAAAATCTTGATGATCAGCCTGTTTCATAAGAACTCCAATCAAGTTAATCTTAGCAGACATGTGTTTCTG
GAGCATCACAGAAGGTATATTGCTAGTTACACTTTGCCCTCCTGCAGTTTCTTCTCTGCTCCCAACCCCATCTC
ATAGCATCCCCCTCTATTTCCAATGCTCCTCTCCAACCGCTTAGTTTCTGAATTTCTTTTAAATTACAGTTTTAT
GAAAGCATATTTTATTTACTTGGTGTGAAATAGCCCTCATAAAACCTAAGCACTTGGAACACAATAATAGTAT
TAACTAACTAGATCTATTGAATTTTCAAGAGAAGAGCCTTCTAACTTGTTTACACAAAAACGAGTATGATTTAGCAT
TCATACTAGTTGAAATTTTTAATAGAATCAAGGCACAAAAGTCTTAAACCATGTGGAAAAATTAGGTAATTATT
GCAGATTGATGTCTCTCAATCCCATGTATTGCGCTTATGTTACAAGTTGTTGTCACAGTTGAGACTTAATTTCTC
CTAATTTCTTCTGCCCCGAAGGGTAAGTGGTGCCTCAGCTTACACAATCATAATTCAAAGTTGGTGGGCAATGT
AATACTTAATTAATAATGATGGAAGAGCTATCTGGAGATTATGAGTAAGCTGATTTGAATTTTCACTATAAAA
CTTTAGTATAATTGTAGTTTGCAAAGTTTATTTTCAAGTTTACATGTAAGGTATTGCAAATAAATCTTGGACAATT
TTGTATGGAACTTGATATTAATACTAGTCTGTGGTTCTTTGAGTTTCTTGTAATTTATAAACCAGGCACAA
GGTTCAAGTTTAGATTTTAAGCACTTTTATAACAATGATAAGTGCCTTTTGGAGATGTAACTTTATAGCAGTTTG
TTAACCTGACATCTCTGCCAGTCTAGTTTCTGGGCAGGTTTCTGTGTCAGTATCCCCCTCCTCTTTGCATTAA
TCAAGGTATTTGGTAGAGGTGGAATCTAAGTGTTTGTATGTCCAATTTACTTGATATGTAAACCATTGCTGTGC
CATTCAATGTTTGTATGCATAATTGGACCTTGAATCGATAAGTGTAATAACAGCTTTTGATCTGTAATGCTTTTAT
ACAAAAGTTTATTTTAAATAATAAATGTTTGTCTTAACTTGCTGCTTTTTTAAATAATCTTACTGTACTTAA
TTCTAATTTTTTCTCATATTTAAATAAAAGGCCATTTCCACCTTTTCT

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FIGURE 1234

MDARRVPQKDLRVKKNLKKFRYVKLISMETSSSSDDSCDSFASDNFANTKPKFRSDISEELASV FYEDSDNESFC
GFSESEVQDVLDHCGFLQKPRPDVTNELAGIFHADSDDESFCGFSESEIQDGMRLQSVREGCRTRSQCRHSGPLR
VAMKF PARSTRGATNKKAESRQPSSENSVTDSNSDSEDESGMNFLEKRALNIKQNKAMLAKLMSELESFPGSFGRGR
HPLPGSDSQSRPRRRRTFFPGVASRRNPERRARPLTRSRSRILGSLDALPMEEEEEDKYMLVRKRKTVDGYMNED
DLPRSRRSRSSVTLPHIIRPVEEITEEELENVCNSNSREKIYNRSLGSTCHQCRQKTIDTKTNCRNPD CWGVRGQF
CGPCLRNRYGEEVRDALLDPNWHCPPCRGICNCSFCRQRDGRCATGVLVYLAKYHGFGNVHAYLKS LKQEFEMQA

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FIGURE 1235

GGCACGAGGCAACTTTGTGTAAAGCAGCTTCTCCACAGAGCTTTCCTGCATTGTTAGTGATGTCGGGCAAAGC
ATCACTCTTTAACCTGGGGCATTGGCCCCAGCAGGGATATCATGGGACCGCAGCCGCTCCGTGCACTGTCTCTGC
CCCCAGAGGAAGCCCTGTCCATGGTTCCCTGGTGCACGGCCACAGGCCTGCCTTGAGGCCACCACATCTGGTGTCTT
AGAACAGCTGCGGGCCCCACTTGGGCAGAAGGAAGAGGTGCTAGCTGCTGCCCCCTGCCTGCTGTGAACACCTGCC
CAGCCCTTCCTTGCTGCTGAGGTGCTCAGACCAGAGTGCCATTAAATACCAACTGATGTCACGGAGCGGACGGT
GCATTGCCAAGGACTCACAGCTGTGGGCTCCCTTCCAGCTCCTCCCACTTCTTGGCTGGGTCTTCTGAGGCCTA
CGTGGAATGAACTACACATGTGGCCTCATGCCCAAGGGTTTGTAGATGGCCTCTGACTCTGTGGGATTCAACTT
GACTTTTTTGCCCCAGGAGGCTCTGTCTGGAAACAGGCTTAGCTTTAGTGCTGGGGTGGGACCTGCCCTGTGGGC
CCCAGGGAGGGGACAGTGGGGGTGAGGCCCTGAGGCTGTCCAGGGTCTGAGCTCTTTGCCTCCAACCTGCTTCTG
CCCCAAAAGGAACAGGCTGTTGGTGGCAGGCTCCTCCCGGGGAGCTGTACTGTACAGACCAAGGTGTAAATAAAC
AGTTTGCTCTTCTAAAAAAAAAAAAAAAAAAAAA

1357/1629
FIGURE 1236

MGFQPLRALSLPFEEALSMVPGARPQACLEATTSGV

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FIGURE 1237

CCTCGCCCCGCTACGCGGGAACCCAACCGCGGCGACCGGACGTGCACTCCTCCAGTAGCGGCTGCACGTCGTGC
AATGCCCCGCTATGAGGAGGTGAGCGTGTCCGGCTTCGAGGAGTTCCACCGGGCCGTGGAACAGCACAAATGGCAA
GACCATTTTCGCCTACTTTACGGGTTCTAAGGACGCCGGGGGAAAAGCTGGTGCCCCGACTGCGTGCAGGCTGA
ACCAGTCGTACGAGAGGGGCTGAAGCACATTAGTGAAGGATGTGTGTTTCATCTACTGCCAAGTAGGAGAAAAGCC
TTATTGGAAGATCCAAATAATGACTTCAGAAAAAACTTGAAAGTAACAGCAGTGCCTACACTACTTAAGTATGG
AACACCTCAAAAACCTGGTAGAATCTGAGTGTCTTCAGGCCAACCTGGTGGAATGTTGTTCTCTGAAGATTAAGA
TTTTAGGATGGCAATCATGTCTTGATGTCCTGATTTGTTCTAGTATCAATAAACTGTATACTTGCTTTGAATTCA
TGTTAGCAATAAATGATGTTAAAAAACTGGCATGTGTCTAAACAATAGAGTGCTATTAAAATGCCCATGAACCT
TTAGTTTGCCTGTAATACATGGATATTTTTAAGATATAAAGAAGTCTTCAGAAATAGCAGTAAAGGCTCAAAGGA
ACGTGATTCTTGAAGGTGACGGTAATACCTAAAACTCCTAAAGGTGCAGAGC

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FIGURE 1238

MARYEEVSVSGFEEFHRAVEQHNGKTIFAYFTGSKDAGGKSWCPDCVQAEFVVREGLKHISEGCVFIYCQVGEKP
YWKDPNNDFRKNLKVTA VPTLLKYGTPQKLVESECLQANLVEMLFSED

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FIGURE 1239

GGCACGAGGGTTCATCGCCGCGGGGCGGAGGCGACAGTGTCTAGCGGGAGCTCCGCGTGTAGCTACGCCGGCCGCC
TGGCTTTGAGACAACGTGATTCTCCGCAGCTGGTCCCTACCCGTGATGTTCTGCCCACGTGAGACCTGAGCTG
AAATGGCAGACGATCTCGGAGACGAGTGGTGGGAGAACCAGCCGACTGGAGCAGGCAGCAGCCCAGAAGCATCAG
ATGGTGAAGGAGAAGGAGACACAGAAGTGATGCAGCAGGAGACAGTTCCAGTTCCTGTACCTTCAGAGAAAACCA
AACAGCCTAAAGAATGTTTTTTGATACAACCAAAGGAAAAGAAAAGAGAATACCACCAAGACCAGGAAAAAGAGAA
AGAAGAAAATTACTGATGTTCTTGCAAAATCAGAACCAAACCAGGGTTACCTGAAGACCTACAGAAGCTGATGA
AGGACTATTATAGCAGCAGACGCTTGGTGATTGAATTAGAAGAACTGAACCTGCCAGACTCCTGTTTCCTCAAGG
CCAATGATTTGACTCACAGTCTTTCCTCATACCTAAAAGGAATTTGTCCTAAGTGGGTAAAACCTTAGGAAGAACC
ACAGTGAGAAGAAATCGGTCTTGATGCTGATCATCTGCAGCTCGGCCGTCCGAGCCCTGGAGCTCATTAGGTCGA
TGACAGCATTTCAGAGGAGACGGCAAAGTTATAAAATTATTTGCAAAGCACATAAAGGTCCAGGCGCAGGTAAAGT
TGCTGGAGAAGCGTGTGGTGACCTGGGTGTAGGAACCTCGGGGAGAATTAAAGAACTTGTTAAACAAGGTGGCC
TTAATTTGAGCCCTTAAAATTTCTGGTTTTTTGACTGGAACCTGGAGAGATCAGAAGTTGAGGAGAATGATGGACA
TTCCCGAGATAAGAAAGGAGGTATTCGAACTTCTGGAAATGGGAGTGCTCAGTCTGTGCAAGTCAGAATCCTTGA
AACTGGGCCTTTTCTAAGTCTGTGTCCTAATGAAGATTCCAGTTTTTCACAGTAGAAGTTGCATCTTATTTAATGA
CTCTGATACATTGCAAGCACTCAGTAAATATCAGCAAATAGTTTATGTTAATTGTGTCAACAGATGGATCACTGG
AATGTGGGGATTCTGAAACAGAAATGAAACTGTCCTTTTGACAACTCTCTTATATAATAAAGTATCACCGGCTTG
TGATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1240

MADDLGDEWWENQPTGAGSSPEASDGE GEGDTEVMQQETVPVPVPSEKTKQPKECF
LIQPKERKENTTKTRKRRK
KKITDVLAKSEPKPGLPEDLQKLMKDYYSSRRLVIELEELNLPDSCFLKANDLTHSL
SSYLKGICPKWVKLRKNH
SEKKSVMMLIICSSAVRALELIRSMTAFRGDGKVIKLF AKHIKVQAQVKLLEKRVVHL
GVGTPGRIKELVKQGGL
NLSPLKFLVFDWNWRDQKLRRMDIPEIRKEVFELLEMGVLSLCKSES LKLG L F

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FIGURE 1241

GTCTACACCCCCTCCTCACACGCACTTCACCTGGGTCGGGATTCTCAGGTCATGAACGGTCCCAGCCACCTCCGG
GCAGGGCGGGTGAGGACGGGGACGGGGCGTGTCCAACCTGGCTGTGGGCTCTTGAAACCCGAGCATGGCACAGCAC
GGGGCGATGGGCGCGTTTCGGGCCCTGTGCGGCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGTGAGCGCCCCACC
GGGGGTCCCGGGTGCGGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGCCGGGTTACACG
ACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCAGAGTGGGACTGCATGTGTGTGCCAGCCTGAATTC
CACTGCGGAGACCCCTTGCTGCACGACCTGCCGGCACCAACCTTGTCCCCAGGCCAGGGGGTACAGTCCCAGGGG
AAATTCAGTTTTGGCTTCCAGTGTATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAAGGCCACTGCAAA
CCTTGGACAGACTGCACCCAGTTCGGGTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAACGCTGTGTGCGTC
CCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCCTGCGTCTCCTC
CTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGAGAGACCCAGCTG
CTGCTGGAGGTGCCGCCGTCGACCGAAGACGCCAGAAGCTGCCAGTTCCCCGAGGAAGAGCGGGGCGAGCGATCG
GCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTGTGAGCCTGGCCGTCCTCCGGGGCCACCGACCGCAGCCAG
CCCCTCCCCAGGAGCTCCCCAGGCCGCAGGGGCTCTGCGTTCTGCTCTGGGCCGGGCCCTGCTCCCCTGGCAGCA
GAAGTGGGTGCAGGAAGGTGGCAGTGACAGCGCCCTGGACCATGCAGTTCGGCGGCCCGCGGCTGGGCCCTGCAG
GAGGGAGAGAGAGACACAGTCATGGCCCCCTTCCCTCCCTTGCTGGCCCTGATGGGGTGGGGTCTTAGGACGGGAG
GCTGTGTCCGTGGGTGTGCAGTGCCAGCACGGGACCCGGCTGCAGGGGACCTTCAATAAACACTTGTCCAGTGA
AAAAAAAAAAAAAA

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FIGURE 1242

MAQHGMGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLGTGTDARCCRVHTTRCCRDYPGEECCSEWDCMCV
QPEFHCGDPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWDCTQFGFLTVPGNKTHN
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLTSAQLGLHIWQLRKTQLLLEVPPSTEDARSCQFP EEERGERSAEE
KGRLGDLWV

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FIGURE 1243

CGTTTTTTAATTTTAAAGTTGGGGGGGTCTCAATTTGTTACCCTGCTGGTCTCGAACTCCCGGACTTAAGCGAT
CCTCTGGCTCCAAGCCCCTACCAGTCTCAGGTTTCTTTACTAAAAGATCACTACCTTTTTTCTCTTATCTGCT
GCCATGGTGAGATGTGGCTTTACCTTCCGCCATGATTGTGAGGCCTTCCCAGCCACGTAGAAGTGTAAAGTCCAAT
AAACCTCTTTTGTAATTAATAAAAAAAAAAATCACTATTTAAGATACTAGGATGGATTGTGACTGTTGAGGAGTAC
TTACATATCCTACATTTGACTACATTATTTCCAAACCAAGTATTCCATCCAAAGGAACATACTGCTATCATAGAG
ACCAAGGAGGGACTGTTTAAGGTTGCCAAGGTGAAGCGAGCTGAGAGGCTTTGTCTCGTGCCAGTAACTCTGAA
ATCTCTCTTAATTCCTGCTGTCCAGGCAGCAGAATGCCATGGTTTCCCAAGTAGGTAGCTGCTTTAGCAGTTAA
AGCCCAAATGTCTGTTCTGTTGATCAGAGGTCTCTGAATTTCTGAAGTGGTGTTCGTTTCTGGTGACTGAGTTA
ATCCTTTACAATCCCTCTTGTAAGTGTGCTAATAGAAAGAATCCACCTTTCAAAGCTGCAGAACCAGACCGTGC
CCTAAATTGACCAACGTAGCTGATGTGCCTCAGGAAGTCTCTTGCCAGCTGTCCCTGTGAAGACCCCCCTCCTCC
CCCCAGCTGCTGCCTTGACACTGAAGCATCTCAGACTGTGCAAAGCCGTGTAGTCATCAAGACAGTAAATCCC
AGGGCTTGTTAAGTGCTGTGTGATAACTTGTGTTGGATGAGACTTAACTTAAAACCACTTACAATAAACTTGGA
AACTACCGTCAGCTGAGTTCAAATTTACTGACGCCATGATATGAGGATGAAGGTTTATTACCTGGTGACATCATC
CTGTTGGTGACATCATCTGTTGGTGACAAGGTGGTGATACATCTCTAATGGGACTTCCCTCAGTGGCAGGCAGG
CTGCCAAGCAACTAACCCCCATCAAGTGCCAGACCCCTCCAGTGTTCTGAGAGTCATCTCCATGCTAAACAGCCT
GCGTTTTATATGATTTCTCTACCCAGCCAAAAAATAATGGTCCATCATGTACGCAGTTATCTAGTCTTAAGTT
ATATTCTGGCTTTTTTCTCCACTTTATTATGGAGCAGAAGTAAGCCTATCATGTTCTTAGAAAGGCTCTTAAGA
GGTGTCTGGAGTCCTTGAATCACTTTAGCATCTGGGGTAGGATGTGCCACCAGGAGGATTGGGCTGGAGCGTG
TGTTTTGCCTTTGACCTGGACTGCTGTCTGATCTTGCTGAACACTCCACCGACATTTCTTAAAGTTGCTCAGTG
CCAATCCAGCAAAGCAGTCCATTTTCCCTTGCCCAAGATTGAGATGTATTGTTTTAGATACAGAAGAGTTCTTGG
ATGAGCCAAGGACAAGCTGGGGTGTCTATATTGAACAGACCTCGATGAAAATCTTGAATTCACCCCAGTGCCCT
CTGTTGGCAAGGGAAGGTGAAGATTGAAAAGTTAAAAAGCTTTTGCCACTTGAGAGGATCAGGGCCGCAACTC
TTGAAGAAGCAAAGGGCTCAGTGCAATTGGGGTCAGCGCTGGTACAGCTGAAGGATGCCGGCCTTGTCAGGTCCC
TCCACAGGGCAGCTTCCAGGGACAGATCGTGGTTTGCATAAAATATCAATGGCTTCATTTTTCGTTTCAAATAGT
GGTCGGAATAATTTCCAGTAGTTGCTTGTGATGAATCCATAGGCACTGACCTGGTCACAGGTATGCAAAGCTGTCA
GCAGCATGAGAGCCCCGGTACTAGGCATATATAGGTCTCCAAAATGTGTGTTAATCAACTTTGATTTCAAGAACC
TTTCTGTCAGGTAGCTGATGAAGTCCGGATGTAGCAGCTTGAATTTACTGGCAGAGGCTTCTGGTCCAAAATAGG
CGTGCGGCTGTCCCCCTTATCTAGGCCCTCAGGGACAGGCACGCCCAGAATGGCCGATCTCAGCATCACATAGT
AGGAGACGAGGGAGTTCTTCATCGTGTTCACAGTGAACCATAGAAGGAAGTCTTGGTGCCACATCGCGCTCGA
AGCCTTTGATCACAGCTCCATTGAGTCTGAATACATAGTCATGGGCATCGATGTTGGGACCCTGGCGGGACCCAT
TCAGAATGCCTCCGTTGCCCACCACGGCACACCGGATACACTTTGGAGGGGTGTCCCTGGGCGGGGCAAACAGCT
TGGCACTCTCTGAGCCGTTTCAAGGCTCAGGGTGGAGGCGATGACTTGGTGAGAGAGCCCCCGCCAGCCATACG
GGGCTTTGTGTTGGCTCAGGCGGTCCCAGAGCGTGGGGTGAAGAGGTCCCCCACAGCAGCACTGGAATGGAGA
GATTGAACAGGCCACGGAAGTGGGGGTGCCGCTGAATGGCCAGGTGAAGCAGGTGTCGGCAGGCCCTGGCCCTTTC
CTGTCCAAGAATTCGATGCCTTGGATTGAAAGAATGCTTCAAATGATGTGGTGTCCCTGGCTCCGGCCGCTGGCC
CCGGGTACCGCTGCACCGCCGAGAAGTACAGGGCAAAGAGGAGCCCCGAGCAGGCAGCCGTGAGCAGGAGCAGCA
GCCAGAAGAACGACCCGCGCGGGAGCCCCATACAGCCCCGGCCCCGCGAGCGCCCCGTCCGACTGACGTCCAGGC
AGAAGGGAGAGAACCGGGTGGGCCGGGTGGCACTTGCGGAG

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FIGURE 1244

RFLILKLGGVSICYPAGLELPDLS DPLAPSPLPVSGFFTKRSLPFFLLSAAM

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FIGURE 1245A

GTGGACCCAGGGTGGGGAACTACCTCTTCTCTCCACGCGGTTGAGAAGACCGGTCGGCCTGGGCAACCTGCGCT
GAAGATGCCGGGAAAACCTCCGTAGTGACGCTGGTTTGGAAATCAGACACCGCAATGAAAAAGGGGAGACACTGCG
AAAGCAAACCGAGGAGAAAGAGAAAAAAGAGAAGCCAAAATCTGATAAGACTGAAGAGATAGCAGAAGAGGAAGA
AACTGTTTTTCCCCAAAGCTAAACAAGTTAAAAAGAAAGCAGAGCCTTCTGAAGTTGACATGAATTCTCTCTAAATC
CAAAAAGGCCAAAAAGAAAGAGGAGCCATCTCAAAATGACATTTCTCCTAAAACCAAAAGTTTGAGAAAGAAAAA
GGAGCCCATTTGAAAAGAAAGTGGTTTCTTCTAAAACCAAAAAAGTGACAAAAAATGAGGAGCCTTCTGAGGAAGA
AATAGATGCTCCTAAGCCCAAGAAGATGAAGAAAGAAAAGGAAATGAATGGAGAACTAGAGAGAAAAGCCCCAA
ACTGAAGAATGGATTTCTTCATCCTGAACCGGACTGTAACCCCACTGAAGCTGCCAGTGAAGAAAGTAACAGTGA
GATAGAGCAGGAAATACCTGTGGAACAAAAAGAGGCGCTTTCTCTAATTTTCCCATATCTGAAGAACTATTAA
ACTTCTCAAAGGCCGAGGAGTGACCTTCCTATTTCTTATACAAGCAAAGACATTCCATCATGTTTACAGCGGGAA
GGACTTAATTGCACAGGCACGGACAGGAACTGGGAAGACATTCTCCTTTGCCATCCCTTTGATTGAGAACTTCA
TGGGGAAGTCAAGACAGGAAGAGAGGCGGTGCCCTCAGGTACTGGTTCTTGACCTACAAGAGAGTTGGCAAA
TCAAGTAAGCAAAGACTTCAGTGACATCACAAAAAGCTGTCTAGTGGCTTGTTTTATGGTGGAACTCCCTATGG
AGGTCAATTTGAACGCATGAGGAATGGGATTGATATCCTGGTTGGAACACCAGGTCTGATCAAAGACCACATACA
GAATGGCAAAGTATCTCACCAAACCTAAGCATGTTGTCTGGATGAAGTGGACCAGATGTTGGATATGGGATT
TGCTGATCAAGTGGAAAGAGATTTTAAAGTGTGGCATAACAAGAAAGATTCTGAAGACAATCCCCAAACATTGCTTTT
TTCTGCAACTTGCCCTCATTGGGTATTTAATGTTGCCAAGAAATACATGAAATCTACATATGAACAGGTGGACCT
GATTGGTAAAAAGACTCAGAAAAACGGCAATAACTGTGGAGCATCTGGCTATTAAGTGCCACTGGACTCAGAGGGC
AGCAGTTATTGGGGATGTCTACCGAGTATATAGTGGTCATCAAGGACGCACTATCATCTTTTGTAACCAAGAA
AGAAGCCCAGGAGCTGTCCCAGAATTCAGCTATAAAGCAGGATGCTCAGTCCTTGATGGAGACATTCCACAGAA
GCAAAGGGAAATCACCTGAAAGGTTTTAGAAATGGTAGTTTTGGAGTTTTGGTGGCAACCAATGTTGCTGCACG
TGGGTTAGACATCCCTGAGGTTGATTGGTTATACAAAGCTCTCCACCAAGGATGTAGAGTCTTACATTTCATCG
ATCCGGGCGGACAGGCAGAGCTGGAAGGACGGGGGTGTGCATCTGCTTTTATCAGCACAAGGAAGAAATATCAGTT
AGTACAAGTGGAGCAAAAAGCGGGAATTAAGTTCAAACGAATAGGTGTTCTTCTGCAACAGAAATAATAAAGC
TTCCAGCAAAGATGCCATCAGGCTTTTGGATTCCGTGCCTCCCACTGCCATTAGTCACTTCAAACAATCAGCTGA
GAAGCTGATAGAGGAGAAGGGAGCTGTGGAAGCTCTGGCAGCAGCACTGGCCCATATTTCAAGTGCCACGTCCGT
AGACCAGCGCTCCTTGATCAACTCAAATGTGGGTTTTGTGACCATGATCTTGCACTGCTCAATTGAAATGCCAAA
TATTAGTTATGCTTGGAAGAAGCTTAAAGAGCAGCTGGGCGAGGAGATTGATTCCAAAGTGAAGGGAATGGTTTT
TCTCAAAGGAAAGCTGGGTGTTTGCTTTGATGTACCTACCGCATCAGTAACAGAAATACAGGAGAAATGGCATGA
TTCACGACGCTGGCAGCTCTCTGTGGCCACAGAGCAACCAGAACTGGAAGGACCACGGGAAGGATATGGAGGCTT
CAGGGGACAGCGGGAAGGCAGTCGAGGCTTCAGGGGACAGCGGGACGGAAACAGAAGATTACAGAGGACAGCGGGA
AGGCAGTAGAGGCCCCGAGAGGACAGCGATCAGGAGGTGGCAACAAAAGTAACAGATCCCCAAACAAAGGCCAGAA
GCGGAGTTTCAGTAAAGCATTGTTGTTCAATTAAGAAATAGAAGATTTATATAGCAAAAAGAGAATGATGTTTGG
CAATATAGAAGTGAACATTATTTTTCATGCAAAGTTAAAAGCACATTGTGCCTCCTTTTGACCACTTGCCAAGTC
CCTGTCTCTTTCAGACACAGACAAGCTTCATTTAAATTATTTTCATCTGATCATTATCATTATTAATTTATTGTT
ACTTCTTCATCAGTTTTTCTTTTGAAGGTGTATGAATTCATTACATTTTTATTCTAATGTATTATCTGTAGAT
TAGAAGATAAAATCAAGCATGTATCTGCCTATACTTTGTGAGTTCACCTGTCTTTATACTCAAAGTGTCCCTTA
ATAGTGTCTTTCCCTGAAATAAATACCTAAGGGAGTGAACAGTCTCTGGAGGACCCTTTGAGCCTTTGGAAGT
TAAGGTTTTCTCAGCCACCTGCCGAACAGTTTTCTCATGTGGTCTTATTATTTGTTCTACTGAGACTTAATACTGAG
CAATGTTTTGAAACAAGATTTCAAACATACTGGGTTGTAATACAGTTTATACCAGTGTATGCTCTAGACTTGGA
AGATGTAGTATGTTTGTATGTGGATTACCTATACTTATGTTTCGTTTTGATACATTTTTAGCTTCTCATTATAAGGT
GATTCATGCTTTAGTGAATTTCTTCATAGATAGTATATATAAAGTACATTTTAATAGAAAGCCAGGGTTTTAAGG
AATTCACATGTATAAGGTGGCTCCATAGCTTTATTTGTAAGTAGGCTGGATAAATGGTGTCTAAATGGTAATGT
ACTCCACTTCTTCTTATTGGAAGATTAACATTATTTACCAAGAAGGACTTAAGGGAGTAAGGGGCGCAGATTAGC
ATTGCTCAAGAGTATGTAAAAAAG
ACAAATTCATAACTGGAAAGCAAAGAGAAGAACAAGTATGATTTGGATGATAAAGCATTGTTTTAATGGTGAAGAA
CTTCACAGATCACTAATGTTTCTAGAGGTTAACTTCAAGTGGGCAAGCTGGGGTTTTTAGGTAGTCAGTGGCCTA
GTTCTTAAAGCCACAGTATAGGATCTGTTAAACTGAATGTCTGTTGAAAGTTTGTGTTTAGCTGCTTGGAGGCTTC

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FIGURE 1245B

CTTTTAAGACAAACTGTATGTGATTAAGTTGTTTTGAGGGAACCTGAAGAACCTGATGTAGCCCCCTGGCCAGATAA
CTGCCTGATTTCTCAGATATTATTTCTCTGGGAAACATTCTACATAGCACAGGAGCTTAAGAGTGGCATTATCTT
CTCGCCTTAATTTCCAGAGATTATTTCTGTACTGAGAATCCTGGAACCTACTATGCTAGGAAATTTAAAGCTGCAT
GGTCTGTCTTGTTCATTTAATTATTGTGAATACCTAGAATCTTCTTGGTCCTGATTTCTCTTGCTTAATCCA
GTCTTTATCTCTAACTGCCCCCTTATTTGATCACCATGTACTAGGAGCTCTGATAGCCAGCTCAGCTCCTAATCCT
TGAGGCAACATTCTTTTTCTATTTGAACCTCAGTTCTGTCTTGAATCCCGACTAGATATTTCTTGCCCTCTGGT
CTCAGAATTCTCTTGGCTTTTATTCCTTGATCCACTTGCCAGTTTTATCACTTTACCCTTGTTCCCTCATGGCTTC
CCATCAAGCCATGGGTATTAGGTGACAGTGTAATTTATTAGATTCTGGTTTTGCCCAAATACTGGGCATGCTTTA
ATAATAACTGAACCATTTTCATTATTTGGATAGGCATGGGTACCTTATCAAGCAGATTAAAAGGATATGGTACCCG
TCCTTTAGAAAAGAACAGCTAAAACCTTGTTGTGGATTATGGATTTAGCCTAAAGAAAAATAATCTGGCATAAAT
TAAGAGTAAGAGAGAAGATTAAATAGAAATTTCACTTCACATAACTTAAACATGGCTATTTCAATAAAGGACTAA
AGTTTCTCCTGGATCCCAGAATTCAACCTGTATTTATAAATGTATAATGTATTTAGCTACTTTTTGGTTTAAATG
AACTTGTGGGTAGCTTGGTAAATGTTATAATTTTACTGTTTTCTACAAAGAAAATATTTTCTAATTTAAGTT
GGAGCTATCTGTGCAGCAGTTTCTCTACAGTTGTGCATAAATGTTTTTACTATAAAATGAGCTAATGTATAAAAT
ACTGCTGTATACCATAATAAAGATAGTAATACTTGAAAAAAA

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FIGURE 1246

WTQGGELPLPLHAVEKTGRPGQPALKMPGKLRS DAGLES DTAMKKGETLRKQTEEEKKKEKPKSDKTEEIAEEEE
TVFPKAKQVKKKAEPSEVDMNSPKSKKAKKKEEPSQNDISP KTKSLRKKKEPIEKKVVSSKTKKVTKN EEPSEEE
IDAPKPKMKKEKEMNGETREKSPKLKNGFPHPEPDCNPSEAASEESNSEIEQEIPVEQKEGAFSNFPISEETIK
LLKGRGVTFLEFPIQAKTFHHVYSGKDLIAQARTGTGKTF SFAIPLIEKLHGELQDRKRGRAPQVLVLAPTRELAN
QVSKDFSDITKKLSVACFYGGTPYGGQFERMRNGIDILVGTPGRIKDHIQNGKLDLTKLKHVVLDEVDQMLDMGF
ADQVEEILSVAYKKDSEDNPQTLLFSATCPHWVFNVAKKYMKSTYEQVDLIGKKTQKTAITVEHLAIKCHWTQRA
AVIGDVIRVYSGHQGRTIIFCETKKEAQELSQNSAIKQDAQSLHGDIPQKQREITLKGFRNGSFGLVATNVAAR
GLDIPEVDLVIQSSPPKDVESYIHRSGRTGRAGRTGVCICFYQHKEEYQLVQVEQKAGIKFKRIGVPSATEI IKA
SSKDAIRLLDSVPPTAIS HFKQSAEKLIEEKGAVEALAAALAHISGATSVDQ RSLINSNVGFVTMILQCSIEMP N
ISYAWKELKEQLGEEIDSKVKGMVFLKGKLGVCFDVPTASVTEIQEKW HDSRRWQLSVATEQPELEGPREGYGGF
RGQREGSRGFRGQRDGNRRFRGQREGSRGPRGQ RSGGKNKSNRSQNKGQKRSFSKAFGQ

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FIGURE 1247A

GCGCGGGGCTGAGCCGCCCGGGATCAGCGCGAGCACCCAGCCCGCCTCGGCCGGGAGGGCCTGAGAACCCCGGGG
GCGTGCTGAGCGTGGAGCTGCCCGGGCTGCTGGCGCAGCTGGCGCGGAGCTTCGCGCTGCTGCTGCCCGTGTACG
CGTGCGGCTACCTGGGGCTCAGCTTCAGCTGGGTTCTCCTCGCGCTCGCGCTGCTCGCCTGGTGTGCGCGCAGCC
GCGGCCCTCAAGGCCCTGCGCCTGTGCCGCGCGCTGGCGCTGCTGGAAGACGAGGAGCGCGTCTGTGCGCCTGGGGG
TGCGCGCCTGCGACCTGCCCGCCTGGGTTCAATTTCCAGACACTGAAAGAGCAGAATGGCTAAATAAGACTGTAA
AACACATGTGGCCTTTCAATTTGCCAATTTATAGAGAAGTTGTTTCGAGAAACTATAGAACCAGCCGTGCGGGGAG
CAAAACCCCACCTTAGCACCTTTAGTTTCACGAAGGTCGACGTGGGCCAGCAGCCCCCTCAGGATCAATGGTGTTA
AGGTATACACTGAAAATGTAGACAAAAGGCAAATATTTTGGACCTTCAGATTAGTTTTGTAGGAAATTGTGAGA
TTGATTTGGAGATCAAACGATATTTTTGTAGAGCTGGTGTGAAAAGTATCCAGATTCATGGTACCATGCGGGTGA
TCCTGGAACCGTTGATTGGAGATATGCCCTTAGTTGGAGCTTTGTCTATCTTCTTCCTTAGGAAACCACTTTTAG
AAATTAACCTGGACAGGACTGACGAATCTTCTGGATGTCCCTGGATTGAATGGTTTATCAGATACTATCATTTTGG
ATATAATATCAAACCTATCTGGTGCTTCCCAATCGAATCACCGTTCCACTTGTGAGTGAAGTTCAAATAGCTCAGT
TGCGGTTTCTGTACCAAAGGGTGTCTAAGGATACATTTTATTGAAGCTCAGGATCTTCAGGGGAAAGACACTT
ACCTTAAGGGACTTGTCAAGGGAAAGTCAGACCCCTATGGAATCATTAGAGTTGGCAACCAAATCTTCCAAAGCA
GAGTCATCAAGGAGAACCTCAGTCCAAAGTGAATGAAGTCTATGAGGCTTTAGTGTATGAACATCCTGGACAAG
AATTAGAGATTGAGCTCTTTGATGAAGACCCAGACAAGGATGACTTTTTAGGAAGTCTTATGATTGACCTCATTG
AAGTTGAAAAGGAGCGCCTTTTAGATGAATGGTTCACTCTGGACGAGGTTCCCAAGGGGAAGCTACACTTGAGAC
TGGAGTGGCTCACGTTAATGCCAAATGCGTCAAACCTCGACAAGGTGCTAACAGACATCAAAGCTGACAAAGACC
AAGCCAACGATGGTCTTTCTCTGCATTGCTGATCTTGTACTTGGATTGAGCAAGGAACCTTCCGTGAGGGAAGA
AAATAAGCAGCAACCCAAATCCTGTTGTCCAGATGTGAGTTGGGCACAAGGCCCAGGAGAGCAAGATTCGATACA
AAACCAATGAACCTGTGTGGGAGGAAAACCTTCACTTTCTTCATTACAAATCCCAAGCGCCAGGACCTTGAAGTTG
AGGTCAGAGACGAGCAGCACCAGTGTTCCTGGGGAACCTGAAGGTCCCCCTCAGCCAGCTGCTCACCAGTGAGG
ACATGACTGTGAGCCAGCGCTTCCAGCTCAGTAACTCGGGTCCAAACAGCACCATCAAGATGAAGATTGCCCTGC
GGGTGCTCCATCTCGAAAAGCGAGAAAGGCCCTCCAGACCACCAACACTCAGCTCAAGTCAAACGTCCCTCTGTGT
CCAAAGAGGGGAGGAAAACATCCATCAAATCTCATATGTCTGGGTCTCCAGGCCCTGGTGGCAGCAACACAGCTC
CATCCACACCAGTCATTGGGGGAGTGATAAGCCTGGTATGGAAGAAAAGGCCCAGCCCCCTGAGGCCGGCCCTC
AGGGGCTGCACGACCTGGGCAGAAGCTCCTCCAGCCTCCTGGCCTCCCCAGGCCACATCTCAGTCAAGGAGCCGA
CCCCAGCATCGCCTCGGACATCTCGCTGCCCATCGCCACCCAGGAGCTGCGGCAAAGGCTGAGGCAGCTGGAAA
ACGGGACGACCCCTGGGACAGTCTCCACTGGGGCAGATCCAGCTGACCATCCGGCACAGCTCGCAGAGAAACAAGC
TTATCGTGGTCTGTGATGCTGCAGAAACCTCATTGCCTTCTCTGAAGACGGCTCTGACCCCTATGTCCGATGT
ATTTATTACCAGACAAGAGGCGGTGAGGAAGGAGGAAAACACACGTGTCAAAGAAAACATTAAATCCAGTGTTTG
ATCAAAGCTTTGATTTCACTGTTTCGTTACCAGAAGTCCAGAGGAGAACGCTTGACGTTGCCGTGAAGAACAGTG
GCGGCTTCTGTCCAAAGACAAAGGGCTCCTTGGCAAAGTATTGGTTGCTCTGGCATCTGAAGAACTTGCCAAAG
GCTGGACCCAGTGGTATGACCTCACGGAAGATGGGACGAGGCCTCAGGCGATGACATAGCCGAGCAGGCAGGAG
GCGTCCCTCTTCAGCGTAGCTCTCCACCTCTACCCGGAACACACCCTCTCACAGACGTACCAATGTTATTTTTATA
ATTTTCATGGATTTAGTTATACATACCTTAATAGTTTTATAAAATTGTTGACATTTAGGCAAAATTTGGCCAATAT
TATCATTGAATTTTCTGTGTTGGATTTCTCTAGGATTTGCGCCAGTTCTTACAACGTGAGTAGGGCGGCGGTAG
CTCTTGTGTCTGTGACTCTGCTCAGCTGTGTCCGTAGGAGTGGATGTGTCTGTGCTTTATTATGGCCTTGTTT
ATATATCACTGAGGTATACTATGCCATGTAAATAGACTATTTTTTATAATCTTTACATGCTGTTTAAATTCAGA
AGGAAATAGATCAAGGAAATATATATATTTTCTTCTAAAACCTTATTAAATTCGTGTGACAAATAATCATTTTCAT
CTTGGCAGCAAAAGTTCTCAGTGACCTATTTTGTGGTGTCTTTTGTGAAAAGAAAAGCTGAAATATTATTAAT
GCTAGTATGTTTCTGCCATTATGAAAGATGAAATAAAGTATTCAAATATTAACATTTTCATAAATATAAGGAT
GTATTATTGAGAAGTAAGTTGAAGGGCTTATAAGGAAAATGTTTTATACTGAGTAATATATTAAGAGAATTGT
CATGGTTTATAAATCACATTATGCTAATCTGAAATTTCTTACATAAAAATGAAGTGTCTTATGTTTATTTTAATT
GCTGTTGTAACCTTACTCATGAAACAGTATACAGACACCTTGACTTTTCTCAACTGTAAGAGCAGACTTTCAAT
GTTAGCAATTAAGCTGTTGTCAAACAATCAGTCATGAGCTTTGTTAATTTTCAATGTTTTCCAGCCTATAAAAA
AAGGAAGGTACACGTTGTCTTTTAAAGGTTGTGAGGTAGATTGGAGTGAGTAGACAGGATATTGCATTAAAAAT
TGAAAGCTCGATCTCATTATTGTGAGGAACCCCCAGTGTGACCTCACACATAGGATGTGGGACCTTTGAGCCGAT

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FIGURE 1247B

GTGCACTGGCCACCACCAGGGTTGGGGGCGCCACAGCTGCGAGCCCGGCCCTGCTGTTCTCAGCAGCCACTTCC
CAGGCTGCCTCACTTTATGCCATGACTGACCTTAATATTGGGATATTGTTATGCAATTTTTATCCTGTTTAGACT
GTTAAAAGCAGGTTTCTGTACTTAAGAGTCCCCAGACCTCCTGTGAGGTGAGGCTCTGTTGCAGTGTCTAGGC
TGTGTGTGTCTGTAAAGAAAGAATGCACATATGTAGACGATTAAAGTGTATATTATAAGCTATATGCTGAAAATGG
CTTCCATAGCCATGAGAACATCTTAAACTATGTGTAAATATATTAAGGAAAGTATAGCTTTGTAATTTAAATTG
GAGCTTTTAGCTTGTTTCATGGAACATATACAACTTGTGGGTAACACATGACCAAACAAACCAAAGTGCCTGTG
ACGGGGCGGGTGGCGTCTACCCACCCTCCCTTCTAGCAGATTCTTATTTTGTGTTGAATTTATAAACAAGGCTGGT
GGCTGTCTACCCACCCTCCCTTCTAGCAGATTTTGATTTTGTTTCAATTTATAACTTACACTTTGAACCATGGGT
TTACTTATAATGGAGTCTGTAGCTTTCACAGCATATTTTCATGTAATCATAAAGACCAGTATATTCCTCCTGCTGA
ATGACATGCGACTGTAAAGCCTCTTTATAAACCATTTCATGTTAGTATATAGGATTATTTGGGAAGCGTATCA
ATACCTTTATAGACAAATACGAACATGTATGCACACAAAACATTTAACTATGGTATTTATGGAAGACAGGTAACA
ACATTAAATCTAGTTGCTTTCCCTTAGTATTAGATTTGTTGAGGGTTTTTTAAAAATCAGGTCTGTTGAAAGTCT
TCTGTCATAATCTATAAAGCAGCAGCACTCATGGAAATTGTAGCATGCCAGTAATTTTTACCAACATCCCATAACA
TCTGAGTTCTGCAGTCCAGTGTGTAATCCGCTCCATGTGTATTTTGCTTAATGGAATGCTTTATTTAAGCACTTA
GGCAGAGTAGACACAATTAAAGGTACAAAGCCCAGAGGAAGTGGTAGAGCAGCACCGTGCCTGCCCTGAGGCAGT
GGAGTCAGTAGCGCTGTCCCCAGGGCCTTGAGTGCCTGGAGGTGCTTGGCCTCCAGTAGCTGCCTCCATTCTCTT
TTAAAAAAGGGGGTGATTCTGAGGCACTGAAGTGCTCCAGATGTGGAGGAGTGAAGCCACCATCGAGGCCAC
ACTCAGCACTCCAGGATCCAGCGATGTCAGACACTCTTGAGTTGTCAAACGTTAATTTTCAGTTTTAAATAAT
CAGTTTATCTAAGAAAAGGGAATTTAACTTTTCTACCTTGAGCCAAGCCAATGAAGGGAAAATTAATTAACCTTA
GTAAATTTGAAGTGCAGCTCTGTTAGCTCGTACATGTGGGTCTTATCCTGATCCTGTGCCTTAAAGTAGGAAG
TGTTTCCAAGTTCAGATTAAAATAGAAGCAGCTGGCCGGGTGCGGTGGCTCACGCCTGTAATCCAGCACTTTGG
GAGGCCGAGGCGGGCGGATGACCTGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGGAGAAACCCCATCTTT
ACTAAAAATACAAAAATTAGCCGGGCGTGGTGGTGGAGCGCACGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGG
CAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCAAGATCGCACCCTGCACTCCAGCCTGGGCA
ACAGAGTGAGACTCCGCTCTCAAAAAATAAATAAAATAGAAGCAGCCTTGTAACGTGATTTACCATGATAATATAT
TCTGCACGGTAAGAATTCCTTTTACAGACATTCTTTATCAAGAGGTCGGCCCTTCTTTTTTCAGGCACATAAGCCA
AATGCAGGCCTGTGTGTAGCTGTGTGTTTTTCTGTGGTTGCCGCATTTATTCCACCTCCAGCTGGACCCCCAC
TGCAAAATAGAGAACAGCGGTGGGGGATGGGGGTAAAAAGTAGAGAACCTCCTTTCTGTTCAACTAATTTACGT
GACAGTGCATGTATTTATTCAATAAAACCTTTATGTTAGCTC

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FIGURE 1248

AGCGGGTTTGC GGGAGCGCCGCGTGGTTAGCGTCGGCGGCTTTTGGCATGGCGACTTTTTCTGGCCCGGCTGGGC
CAATCCTGTCGCTTAATCCGCAGGAAGATGTCGAGTTTCAAAGGAGGTGGCGCAGGTTTCGAAGCGCATAACCC
AGCGAAAAAACAAGAACAACCTACTCCTGGAGTAGTCTATGTGCGCCACCTACCTAACCTACTTGACGAAACCC
AGATCTTTTCATATTTCTCCAGTTTGGCACTGTGACACGGTTCAGGCTGTCCAGAAGTAAAAGGACTGGAAATA
GCAAAGGCTATGCATTTGTGGAGTTTGAGTCTGAGGATGTTGCCAAAATAGTTGCTGAAACAATGAACAACCTACC
TGTTTGGTGAAAGACTCTTGGAGTGTCATTTTATGCCACCTGAAAAAGTACATAAAGAACTCTTTAAAGACTGGA
ATATCCATTTAAGCAGCCATCATATCAATCAGTGAAACGGTATAATCGGAATCGGACACTAACACAAAAGCTAC
GGATGGAGGAGCGATTTAAAAAGAAAGAAAGATTACTCAGGAAGAAATTAGCTAAAAAGGAATTGACTATGATT
TTCCTTCTTTGATTTTACAGAAAACGGAAAGTATTTCAAAACTAATCGTCAGACGTCTACAAAAGGCCAGGTTT
TACGTAAGAAGAAGAAAAAGTTTCAGGTACTCTTGACACTCCTGAGAAGACTGTGGATAGCCAGGGCCCCACAC
CAGTTTGTACACCAACATTTTTGGAGAGGCGAAAACTCAAGTGGCTGAACTGAATGATGATGATAAAGATGATG
AAATAGTTTTCAAACAGCCCATATCCTGTGTAAAAGAAGAAATACAAGAGACTCAAACACCTACACATTCACGGA
AAAAAGACGAAGAAGCAGCAATCAGTGATTTTTCAATGTATTATATTTCTTTTGAAAAATATAATATTTTATGA
GAGTGGACTTTGTATTTCACTAGGTACAATGGAATACAACCTTTGACAAGATTTTCAGAGGAAAAATACACTGTT
TGGTCAAGTTAAGGAAAGCAGTGTGTAATTTGGATTGCCTGCCCTTGGCTGAAATACAGGGGTGCATACCATCT
TGCAGTGGCTTGGCTGACATTGCCTCTTTGTCTGCGCTCTAGTTTTCTTTTGATATTTCATAGCTCTCCTTAGT
TTACTCTGCCTGGATAGAAAGTTGACCACTAACTGCAGGTTTAAGTACTAACTGCAGCCTTTTCTGTGCGCCAGC
AATTAAAGACCACCAATCTTGTGTTGTCCATCTACATGGTTTGTGCGGGACATTTAACTCATGGAGGTGCTTTAGA
TTTCAACATCAGATGGTTGAAGCTGGAAGTTTAATTATATGTAGAGTGAGAAGGCAGTTCCAGTTTTAGCACAGA
TTTGTTTATGTGTTTCAGATTTTAATAGAGATTCAAAAATGACTCATTTTTTACCAATAATGTTAAATTAGTTTTGG
TTGTGCTAGCATGAATTAATAACCACCATTTTATACCAGTATCATCAGTGAAGAATTGTATTTCAAGATTCAAAC
AATAACCAGCAATTAAACTTTTTTCTACAATGTATTTGTTTGCAGTAGGACTTGGGAGTCATTGGAAAAAAA
ATAATAAATTTTCCCCTTCATTAACAAAAA

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FIGURE 1249

MATFSGPAGPILSLNPQEDVEFQKEVAQVRKRITQRKKQEQLTPGVVYVRHLPNLLDETQIFSYFSQFGTVTRFR
LSRSKRTGNSKGYAFVEFESEDVAKIVAETMNNYLFGERLLECHFMPPEKVHKELFKDOWNIPFKQPSYQSVKRYN
RNRTLQKLRMEERFKKKERLLRKKLAKKGIDYDFPSLILQKTESISKTNRQTSTKGQVLRKKKKKVSGLDTPE
KTVD SQGPTPVCTPTFLERRKSQVAELNDDDKDDEIVFKQPI SCVKEEIQETQTPTHSRKKRRRSSNQ

1373/1629
FIGURE 1250

GGCGCTCCGCCTGCTGCGCGTCTACGCGGTCCCCGCGGGCCTTCCGGGCCCCACTGCGCCGCGCGGACCGCCTCGG
GCTCGGACGGCCGGTGTCCCCGGCGCGCCGCTCGCCCGGATCGGCCGCGGCTTCGGCGCCTGGGGCTCGGGGCTC
CGGGGAGGCCGTGCCCCGCGATGCTGCTCTCCAAGTTCGGCTCCCTGGCGCACCTCTGCGGGCCCCGCGGCGTGG
ACCACCTCCCGGTGAAGATCCTGCAGCCAGCCAAGGCGGACAAGGAGAGCTTCGAGAAGGCGTACCAGGTGGGCG
CCGTGCTGGGTAGCGGCGGCTTCGGCACGGTCTACGCGGGTAGCCGCATCGCCGACGGGCTCCCGGTGGCTGTGA
AGCACGTGGTGAAGGAGCGGGTGACCGAGTGGGGCAGCCTGGGCGGCGCGACCGTGCCCCCTGGAGGTGGTGTGCTGC
TGCGCAAGGTGGGCGCGGCGGGCGGCGCGCGGCGTTCATCCGCCTGCTGGACTGGTTCGAGCGGCCCGACGGCT
TCCTGCTGGTGTGCTGGAGCGGCCCCGAGCCGGCGCAGGACCTCTTCGACTTTATCACGGAGCGCGGCGCCCTGGACG
AGCCGCTGGCGCGCCGCTTCTTCGCGCAGGTGCTGGCCGCCGTGCGCCACTGCCACAGCTGCGGGGTCTGTGCACC
GCGACATTAAGGACGAAAATCTGCTTGTGGACCTGCGCTCCGGAGAGCTCAAGCTCATCGACTTCGGTTCGGGTG
CGCTGCTCAAGGACACGGTCTACACCGACTTCGACGGCACCCGAGTGTACAGCCCCCGGAGTGGATCCGCTACC
ACCGCTACCACGGGCGCTCGGCCACCGTGTGGTGTGCTGGGCGTGTCTCTACGATATGGTGTGTGGGGACATCC
CCTTCGAGCAGGACGAGGAGATCCTCCGAGGCCGCTGCTCTTCGGAGGAGGGTCTCTCCAGAGTGCCAGCAGC
TGATCCGGTGGTGCCTGTCCCTGCGGCCCTCAGAGCGGCCGTGCTGGATCAGATTGCGGGCCATCCCTGGATGC
TGGGGGCTGACGGGGGCGCCCCGGAGAGCTGTGACCTGCGGCTGTGCACCCTCGACCCTGATGACGTGGCCAGCA
CCACGTCCAGCAGCGAGAGCTTGTGAGGAGCTGCACCTGACTGGGAGCTAGGGGACCACCTGCCTTGGCCAGACC
TGGGACGCCCCCAGACCCTGACTTTTTCTGCGTGGGCGGTCTCCTCCTGCGGAAGCAGTGACCTCTGACCCCTG
GTGACCTTCGCTTTGAGTGCCTTTTGAACGCTGGTCCCGCGGGACTTGGTTTTCTCAAGCTCTGTCTGTCCAAAG
ACGCTCCGGTTCGAGGTCCCGCCTGCCCTGGGTGGATACTTGAACCCAGACGCCCCCTCTGTGCTGCTGTGTCCGG
AGGCGGCCTTCCCATCTGCCTGCCCCACCGGAGCTCTTCCGCGGCGCAGGGTCCCAAGCCACCTCCCCGCCCT
CAGTCTGCGGTGTGCGTCTGGGCACGTCTGCACACACAATGCAAGTCTGGCYTCCGCGCCCCGCCCCGCCACG
CGAGCCGTACCCGCCGCCAACTCTGTTATTTATGGTGTGACCCCTGGAGGTGCCCTCGGCCCCACGGGGCTATT
TATTGTTTAATTTATTTGTTGAGGTATTTCTCTGAGCAGTCTGCCTCTCCCAAGCCCCAGGGGACAGTGGGGA
GGCAGGGGAGGGGGTGGCTGTGGTCCAGGGACCCCAGGCCCTGATTCTGTGCTGCGCTGTCTGCTGCCCCGC
CTGTCAGAAGATGAACATGTATAGTGGCTAACTTAAGGGGAGTGGGTGACCCTGACACTTCAGGCACTGTGCCC
AGGGTTTGGGTTTTTAATTATTGACTTTGTACAGTCTGCTTGTGGGCTCTGAAAGCTGGGGTGGGGCCAGAGCCT
GAGCGTTTAATTTATTCAGTACCTGTGTTTGTGTGAATGCGGTGTGTGCAGGCATCGCAGATGGGGGTCTTTCA
GTTCAAAAAGTGAGATGTCTGGAGATCATATTTTTTTATACAGGTATTTCAATTAAAATGTTTTTGTACATAGAAA
AAAAAAAAAAAAAAAAAAAAAGGGCGG

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FIGURE 1251

RSACCASTRSPRAFAHCAARTASGSDGRCPRRAARPDRPRLRRLGLGAPGRPSPAMLLSKFGSLAHL CGPGGVD
HLPVKILQPAKADKESFEKAYQVGAVLGSGGFGTVYAGSRIADGLPVAVKHVVKERVTEWGS LGGATVPLEVVLL
RKVGAAGGARGVIRLLDWFERPDGFLLVLERPEPAQDLDFD FITERGALDEPLARRFFAQVLA AVRHC HSCGVVHR
DIKDENLLVDLRS GELKLIDFGSGALLKDTVYTD FDGTRVYSPPEWIRYHRYHGRSATVWSLGVLLYDMVCGDIP
FEQDEEILRGRLLFRRRVSPECQQLIRWCLSLRP SERPSLDQIAAHPWMLGADGGAPESCDLRLCTLD PDDVAST
TSSSESL

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FIGURE 1252A

GACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACGTCGTCGACGGGGGTGGCCGTGGGAGCT
GAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCCGAGCCGGGCAGGATGGATCACCACCAGCCGGGGACT
GGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAAAGTCAAGATCATCGGCTATAGAGCAGCCACCTACTTCAAAC
CCAGCACCAGCAGATTGTGCAGGCTGTGTCTTCAGCACCAGCAGCTTGAAAGTACTCTTCCCTCCACCATATAGT
AGTATTACTGTGGAAGTACCTACAACCTCAGATACAGAAGTTTACGGTGAGTTTTATCCCGTGCCACCTCCCTAT
AGCGTTGCTACCTCTCTTCTACATACGATGAAGCTGAGAAGGCTAAAGCTGCTGCAATGGCAGCTGCAGCAGCA
GAAACATCTCAAAGAATTGAGGAGGAAGAGTGTCCACCAAGAGATGACTTCAGTGATGCAGACCAGCTCAGAGTG
GGGAATGATGGCATTTCATGCTGGCATTTCATGGCATTATTTTCAACTGGCTTGGATTGTTTATCCTTC
TGTATCACCATAACCATAGCTGGAAGGTATGGTGCTATCTGCGGATTGGCCTTTCCTTGATCAAATGGATCCTT
ATTGTCAGGTTTTCTGATTATTTTACTGGATATTTCAATGGACAGTATTGGCTTTGGTGGATATTTCTTGACTT
GGCCTGCTCCTTTCTTCAGAGGATTTGTTAATTATCTAAAAGTCAGAAACATGTCTGAAAGTATGGCAGCTGCT
CATAGAACAAGGTATTTCTTCTTATTGTAGAGACTGCATCAACCCGACATTCCTTTCTTATACCAATGTGAAATT
TCCAGATCATCTGTAAACCTACAACCTTAATAGAAGACTACTAATAACAGAAGACAAATTAGTGAAGAAAAGACG
GAGTTTCGAAATTGAATGGCAGGGTGGTTTTTGGCTTACAAGCCATTTCTGTTCAATTCTTTAAGTATCTATATTT
ATTTGTTTTGCACATATGCATATGTGCCATTTAAGATATTTGCATATACTTGATAGAAACCATAAAGTTGTAGC
AGTTAAGTCCAGTCACATTTGGTTAATCAGTGTTTGATATAATTGAAAGAGTTGAGTGGATAAACAGTCTTCCAG
CTTGTAATGCCATTGACTTCTGACCTGACATTTAGTATAATAAAAAATGAAATCTTAACCATGTCAAATGATTT
AGTTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCTTTTGTATATAAGGTGTATTGAAACCT
GCAGTGCTGATTATTAGAAAGGATTTGTGCGATTTTGAACATGATATTTACATTATTATTTAGGAAAACCTTTC
CTGTAAATAACCATGCATAACTTACTTTCTGCAATGTTTTCTTAGAAATTGTGTCCAGATAGCTTTCACATAATTT
TAAATTAAGTGAACATAATATATATGTGTATATGTATACACATATATATACACACACATATATATTTAGAA
ACGTGAGTGTTAAAGATAGAATTTGTTTTAGGACAAATTTTAAAGAAATGTGGGAATACCAAATGTCCTTTATAA
GAAAAATAAATTTGTTTTAAGGGACATACCAGTTTTAGGGATTTTCAGATGGGAAGCTGCATTTTAGGATTGC
CCATCTTAAGAGATCTTGCAGGAAGAGATTGTATTAGATATTATATTATTTCAATTAAGATAATTTTCAAAGTT
AATTTTCTAAATAAGATAATTTCTCATTTGTGTTTGTCTTTTAAAGGCCAATAAAATATCTTTCAGTATCATTGT
AATAATTTTTTAGAGTTTAATTTGTAAAGCTTAGCAAATAAAATCTTGTACTATGAATAGCTTCTTGCTTTATGA
CTTTAGGATTAACCTTGTAACCAACATATCCTGAACTGAGATATGCAAAATACTCATTTCAGTTATGGAAATGT
GTTTGTGGCATAATAGGACTGTGGGCTGTGTGTGTAGTGAGAGTGTGTAGCCACTATTATAACTGGAATTTAAT
TTACATTATAAACTACTATATTTCCCATCTTGCAATCATTTTATGTCTCATCTGTTTTTCTTTCGGTTATAT
CTTTGGTTTTGAATACCAACATTTAAATGATGGTATTTTATCTTTTAACTTAAATTTAATACAGCTAT
ATGGACCTTATAAAATGATTTCTTATTTATTATTAGACATTACTACTAAAAGGTACATCTAACTATTCAGGGAC
ATTTTTCCATTTCCAAAAATAAAATTTATTATGCTTTATAACCTCTTCTGTATTTTCTAATTTTTTCAATGTCT
TTGATAAATAAAACAGTTTTTGTGTTTGTCTAATATAGCCTATTTTTTGTGTTTGTCTCATTTCAGTTTACTTTCCTGCG
TAGAATTTTTATTGTTATATTAATTTTATTGTTGTATTAAAGTACCTGTGTTACACCCCTTGAAGTAAGACA
GTAGCATGGGGTAAAGAAAAATATTAGTTTAGTTGCCTAATTTGGAAGTTAATTAATTAACCTGTACTAAT
AACATATTCAAACCTCATGCTGGATCTCTTTCATATTAATTTCTTATAGACCTGTACTTTATCTTTCAATAATTT
TTAAATGAAATTAAGCTTTGCTACATGGTAATTAATAATTAAGTATAGGAAGCTTAGCTATCAAACATCGACTTACT
AAAATTTCAATTTAGCTTTTATGGTATATGTGCTGTTTTCTGAATATGGATACATGTTACTTTTGATCCAGCAT
CAAACCTTCATTTTGTGTTTGTGCTTTTCCCCCAATCTGTAAGGTTCAAGTATACATATTACTGAATCCTCTA
TAATTTGGCATAATTCAATGGTAGCCTTAATCTCATCATGTAAGCAGGGGAATCAGAATGTTATTTTCAAGAACT
TAATGTTCCCTTCAGATATATAAAATCCTGCATACTTCATTTCTGTGAGCTTGAACAGCTGCTGTTGTGTTTTG
GGGATGCTTGATCATCTTTGCACTCTGCCTTAAAGATTGAAAAATCAAACCTCTGTTAGGGTATCTAAACATTT
TTGAGTGTGAACCTGGGGATTGGAAGTTAATACAAAAAATTTCAAATTATTTCTATTGTAAATGAATAAGCTAGT
CATGGCTAGGATAATCCATTTTCATGTATTTATGCAATAAACTGAATTTTAAAGGCAAAACACACTTTTCTATA
TAGTGTATGCAGGACAGATTTTAGAACTTAGATTAAATACAAATCCCATTACATTGGTTAAATGAATCTCT
GCTTAATGGAAAAATACTAATCTTTAGCCTATTTTGTGCTATAAGATATATTTCAATTTAGACATGCCTTCTA
AGTTGTTACAGATTTTTTACCTGCTAAAACAATATTATTTCCAGTAAACCTCTCCTAACAGGAAAGTGGAGTT
CAAATATCCAATTGGAGAAAAATTCAGAGTTCCTTCATTAAATATAATTTTTTTCATCTAGTATGTACTATTTTC

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FIGURE 1252B

AAGAAGTGCAAAAAGTAATGATAGTGAATGTGATACCATACTTAACTAAGGTAATATATATCCTTAGTTTGCTCA
AAAGAGTCCTGGTTATTCCTGTTTTCTCAGCTTAATAGTGCCTCATCGTACTCTCAAAAGTGTTCTAATTGGAG
GATAAGTTATATGATCATCCTGTGTATAATTGTAGACTGTACCAAGAAGCAACTACCTTAGCTCCACTGCCCTTT
GAGGGATGGAAGTGGGGTAAGGGCAGGAGCCAGTTATTATTGCCACAGTGTTTTCTAATGAACCAATTTGGCCTGT
AGAAGAGGAATAGTATTTTTTTTAATAGTTGTATTTGAATGATTCCAGCTTATCGTAAATACTAAACTGAATGGC
TTTTATATTTTTTAACTGCTGTAAATGTTATTTTAGCATTATTAGTTGTTTATTATTTAATTCTTCAAATAGTC
ATATGAAAACATATATTTGATAAAGGTCAATTGTTAGATGATAATGTGCCATTCATTATCATAGGAATGTCCTTG
CCCATATATAAAACATGCTGGCATGTATTTTACTTGTTAATAAAGTTGTATAGATGTGGAAGTGTGAACCTGTGA
TGCATCCTTTTCAAATCAGTTTAAGATTTCGCATATTATCATGACTGTGACCTCACTAAACTGTTTATGTGACAA
ACCTTTCAAGATTGGAGATGAAAACAACACTTGTGAAATTAGGTTGGGGTTGCAACATCTTTTAACTTCTCAGTT
ATTTGTATGTCAGGAAACAGATTGTGGTTTAATTTTAATAAACAAAATATCATCTTTTTGAAAAT

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FIGURE 1253

DRGCRNGGGRGPAATTSSSTGVAVGAEHGEDSLSRKPDPEPGRMDHHQPGTGTRYQVLLNEEDNSESSAIEQPPTSN
PAPQIVQAVSSAPALETDSSPPPYSSITVEVPTTSDTEVYGEFYVPVPPYSVATSLPTYDEAEKAKAAAMAAAAA
ETSQRIQEEECPPRDDFSDADQLRVGNDGIFMLAFFMAFIFNWLGFCLSFCITNTIAGRYGAICGFGLSLIKWIL
IVRFSDYFTGYFNGQYWLWWIFLVLGLLLFFRGFVNLYLKVRNMSESMAAAHRTRYFFLL

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FIGURE 1254A

GACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACGTCGTCGACGGGGGTGGCCGTGGGAGCT
GAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCCGAGCCGGGCAGGATGGATCACCACCAGCCGGGGACT
GGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAA CT CAGAATCATCGGCTATAGAGCAGCCACCTACTTCAAAC
CCAGCACCGCAGATTGTG CAGGCTGTGTCTTCAGCACCAGCACTTGAAACTGACTCTTCCCTCCACCATATAGT
AGTATTACTGTGGAAGTACCTACAAC TT CAGATACAGAAGTTTACGGTGAGTTTTATCCCGTGCCACCTCCCTAT
AGCGTTGCTACCTCTCTTCTACATACGATGAAGCTGAGAAGGCTAAAGCTGCTGCAATGGCAGCTGCAGCAGCA
GAAACATCTCAAAGAATT CAGGAGGAAGAGTGTCCACCAAGAGATGACTTCAGTGATGCAGACCAGCTCAGAGTG
GGGAATGATGGCATT TTT CATGCTGGCATT TTTT CATGGCATT TAT TTTT CAACTGGCTTGGATT TTTT GTTTATCCTTC
TGTATCACCAATACCATAGCTGGAAGGTATGGTGCTATCTGCGGATT TGGCCTTTCCTTGATCAAATGGATCCTT
ATTGTCAGGTTTTCTGATTAT TTTT ACTGGATAT TTTT CAATGGACAGTATTGGCTT TGGTGGATAT TTTT CTGTACTT
GGCTGCTCCTTTTCTTCAGAGGATT TGT TTAATTATCTAAAAGTCAGAAACATGTCTGAAAGTATGGCAGCTGCT
CATAGAACAAGGTAT TTTCTTCTTATTGTAGAGACTGCATCAACCCGACATTCCCTTCTTATACCAATGTGAAATT
TCCAGATCATCTGTAAACCTACAAC TTTAATAGAAGACTACTAATAACAGAAAGACAAATTAGTGAAGAAAAGACG
GAGTTTCGAAATTGAATGGCAGGGTGGTTTTTGCTTACAAGCCATT TCTGTTCATTCTTTAAGTATCTATAT TTTT
ATTTGTTTTGCACATATGCATATGTGCCATT TTAAGATAT TTTGCATATACTTGATAGAAACCATAAAGTTGTAGC
AGTTAAGTCCAGTCACATT TGGTTAATCAGTGTTTGTATATAATTGAAAGAGTTGAGTGGATAAACAGTCTTCCAG
CTTGTAATGCCATTGACTTCTGACCTGACAT TTAGTATAATAAAATGAAATTCTTAACCATGTCAAATGATTT
AGTTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCTTTTGTATATAAGGTGTATTGAAACCT
GCAGTGCTGATTATTAGAAAGGATT TGTGCGATT TTTTGAACATGATATTTACATTAT TATTTAGGAAAACCTTTC
CTGTAAATAACCATGCATAACTTACTTTCTGCAATGTTTTCTTAGAAATTGTGTCCAGATAGCTTTCACTAATTT
TAAATTAAGTGAAC TAAATATATATGTGTATATGTATACACATATATATACACACACATATATATATTTAGAA
ACGTGAGTGTTAAAGATAGAAT TTTGTTTTAGGACAAATTTTAAAGAAAATGTGGGAATACCAAATGTCCTTTATAA
GAAAAATAAATTTTGT TTTTAAAGGGACATACCAGTTTTAGGGATTTTCAGATGGGAAGCTGCATTTT TAGGATTGC
CCATCTTAAGAGATCTTGCAGGAAGAGATTGTATTAGATATTATATTTATTTTCAATTAAGATAATTTTCAAAGTT
AATTTTCTAAATAAGATAAT TCTCATT TGTGTTTGTCTTTTAAAGGCCAATAAAATATCTTTCAGTATCATTGT
AATAATTTTTTAGAGTTTAAATTTGTAAAGCTTAGCAAATAAAATCTTGTACTATGAATAGCTTCTTGCTTTATGA
CTTTAGGATTAACCTTGTA AAAAACATATCCTGAACTGAGATATGCAAAATACTCATT TTTCAAGTTATGGAAATGT
GTTTGTGGCATATAGGACTGTGGGGTCTGTGTGTGTAGTGAGAGTGTGTAGCCACTATTATAACTGGAATTTAAT
TTACATT CATAAACTACTATATTTCCCATCTTGCAAATCATT TTTATGTCTCATCTGTTTTCTCTTCGGTTATAT
CTTTGGTTTTGAATACCAACATTTAAATGATGGTATTTTATCTTTTAACTTAAAAATTTTAAATACAGCTAT
ATGGACCTTATAAAATTGATTTCTTATTTATTATTAGACATTACTACTAAAAGGTACATCTAACTATTCAGGGAC
ATTTTTCCATTTTCAAAAAATAAAATTTATTATGCTTTATAACCTCTTCTGTATTTTCTAATTTTTTCATTGTCT
TTGATAAATAAAACAGTTTTTGT TTTTGCTAATATAGCCTATTTTTTGT TTTTGTCTCATT CAGTTTACTTTCTCGG
TAGAATTTTTATTGTTATATTA AAATTTTATTGTTGTATTAAAGTACCTGTGTTACACCCCTTGAAGTAAGACA
GTAGCATGGGGTAAAGAAAAAATATTTAGTTTAGTTGCCTAATTTGGAAGTTAATTAAAAATTAACCTGTACTAAT
AACATATTCAAAC TCATGCTGGATCTCTTTCATATTAATTTCTTATAGACCTGTACTTTATTTCTTTCAATAATTT
TTAAATGAAATTAAGCTTTTGCTACATGGTAATTAATAATTACTAGGAAGCTTAGCTATCAAACATCGACTTACT
AAAATTTCAATTTTAGCTTTTATGGTATATGTGCTTGT TTTCTGAATATGGATACATGTTACTTTTGATCCAGCAT
CAAACTTCACTTTTTTGT TTTGACTTTTCCCCCCTGTAAGGTTCAAGTATACATATTACTGAATCCTCTA
TAATTGGCATAATTCAATGGTAGCCTTAAATCTCATCATGTAAGCAGGGGAATCAGAATGTTATTTTCAAGAACT
TAATGTTCCCTTCAGATATATAAAATCCTGCATACTTCATTTCTGTGAGCTTGAACAGCTGCTGTTGTGTTTTG
GGGATGCTTGATCATCTTTGCACTCTGCCTTAAAGATTGAAAAATCAAACTCTTGTTAGGGTATCTAAACATTT
TTGAGTGTGAAC TGGGATTGGAAGTTAATACAAAAAATTTCAAATTATTTCTATTGTAAATGAATAAGCTAGT
CATGGCTAGGATAATCCATTTTCTATGATTTTATGCAATAAACTGAATTTTAAAGGCAAAAACAACACTTTTCTATA
TAGTGTATGCAGGACAGATTTTAGAACTTAGATTAAAATACAAATCCCATTACATTTGGTTAAAATGAATCTCT
GCTTAATGGA AAAAATACTAATCTTTAGCCTATTTTGAGTCTATAAGATATATTTCAATTTTAGACATGCCTTCTA
AGTTGTTACAGATTTTACCTGCTAAAACAATATTTTCCAGTAAAACCTCTCCTAACAGGAAAAGTGGAGTT
CAAAATATCCAATTGGAGAAAAATTCAGAGTTCCTTCATTAAATATAATTTTTTTTCATCTAGTATGTACTATTTT

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FIGURE 1254B

AAGAAGTGCAAAAAGTAATGATAGTGAATGTGATACCATACTTAACTAAGGTAATATATATCCTTAGTTTGCTCA
AAAGAGTCCTGGTTATTCCTGTTTTCTCAGCTTAATAGTGCCTCATCGTACTCTCAAAAGTGTCTAATTTGGAG
GATAAGTTATATGATCATCCTGTGTATAATTGTAGACTGTACCAAGAAGCAACTACCTTAGCTCCACTGCCCTTT
GAGGGATGGAAGTGGGGTAAGGGCAGGAGCCAGTTATTATTGCCACAGTGTTTTCTAATGAACCATTGCGCCTGT
AGAAGAGGAATAGTATTTTTTTTAATAGTTGTATTTGAATGATTCCAGCTTATCGTAAATACTAAACTGAATGGC
TTTTATATTTTTAACTGCTGTAAATGTTATTTTAGCATTTATTAGTTGTTTATTATTTAATTCTTCAAATAGTC
ATATGAAAACATATATTTGATAAAGGTCAATTGTTAGATGATAATGTGCCATTCAATTATCATAGGAATGTCCTTG
CCCATATATAAAACATGCTGGCATGTATTTACTTGTTAATAAAGTTGTATAGATGTGGAAAGTGTGAACCTGTGA
TGCATCCTTTTCAAATCAGTTTAAGATTGCGATATTATCATGACTGTGACCTCACTAAACTGTTTATGTGACAA
ACCTTTCAAGATTGGAGATGAAAACAACACTTGTGAAATTAGGTTGGGGTTGCAACATCTTTTAACTTCTCAGTT
ATTTGTATGTCAGGAAACAGATTGTGCTTTAATTTTAATAAACAAATATCATCTTTTTGAAAAT

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FIGURE 1255

ACAGGAAGTGAAGAGCTTCCGCCGGGAGACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACG
TCGTCGACGGGGGTGGCCGTGGGAGCTGAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCGAGCCGGGC
AGG**ATG**GATCACCACCAGCCGGGGACTGGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAA**CT**CAGAATCATCG
GCTATAGAGCAGCCACCTACTTCAAACCCAGCACCGCAGATTGTGCAGGCTGCGTCTTCAGCACCAGCACTTGAA
ACTGACTCTTCCCCTCCACCATATAGTAGTATTACTGTGGAAGTACCTACA**ACT**TCAGATACAGAAGTTTACGGT
GAGTTTTATCCCGTGCCACCTCCCTATAGCGTTGCTACCTCTCTTCTTACATACGATGAAGCTGAGAAGGCTAAA
GCTGCTGCAATGGCAGCTGCAGCAGCAGAAACATCTCAAAGAATT**CAGG**AGGAAGAGTGTCCACCAAGAGATGAC
TTCAGTGATGCAGACCAGCTCAGAGTGGGGAATGATGGCATT**TTT**CATGCTGGCATT**TTTT**CATGGCATT**TTATTTT**C
AACTGGCTTGGATT**TTT**GT**TTT**ATCCTTCTGTATCACCAATACCATAGCTGGAAGGTATGGTGCTATCTGCGGATTT
GGCCTTTCTTGATCAAATGGATCCTTATTGT**CAGG**TTTTCTGATTATTTTACTGGATATTTCAATGGACAGTAT
TGGCTTTGGTGGATATTTCTTGTACTTGGCCTGCTCCTTTTCTTCAGAGGATT**TT**GT**TA**ATTATCTAAAAGTCAGA
AACATGTCTGAAAGTATGGCAGCTGCTCATAGAACAAGGTATTTCTTCTTATTG**TAG**AGACTGCATCAACCCGAC
ATTCTTTCTTATACCAATGTGAAATTTCCAGATCATCTGTAAACCTACA**ACT**TTAATAGAAGACTACTAATAAC
AGAAGACAAAATTAGTGAAGAAAAGACGGAGTTTCGAAATTGAATGGCAGGGTGGT**TTTT**TGCTTACAAGCCATTT**C**
TGTTCA**TTCTTT**AAGTATCTATATTTCA**TTT**GT**TTTT**GCACATATGCATATGTGCCCATTTAAGATATTTGCATAT
ACTTGATAGAAACCATAAAGTTGTAGCAGTTAAGTCCAGTCACATT**TT**GGTTAATCAGTGT**TT**GTATATAATTGAAA
GAGTTGAGTGGATAAACAGTCTTCCAGCTTGTAATGCCATTGACTTCTGACCTGACATTTAGTATAATA**AAAA**AT
GAAAT**CTTT**AACCATGTCAAATGATTTAGTTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCT
TTTGTATATAAGGTGATTGAAACCTGCAGTGCTGATTATTAGAAAGGATTTGT**CAG**ATTTTGAACATGATAT
TTACATTATTATTTAGGAA**ACTCTT**CCTGTAAATAACCATGCATA**ACTTACTTT**CTGCAATGTTT**CTT**AGAAA
TTGTGTCCAGATAGCTTTCACTAATTTTAAATTAAGTGA**ACTAA**TATATATGTGTATATGTATACTCATATATA
TACACACACACATATATATATCTAGAAACGTGAGTGTTAAAGATAGAATTTGT**TTTT**AGGACAAATTTTAAGAA
AATGTGGGAATACCAATGTCCTTTATAAGAAAATAAATTTTATTTTAAGGGACATACTAGTTT**TT**AGGGATTTT
CAGATGGGAAGCTGCATTTT**TT**AGGATTGCCATCTTAAGAGATCTTG**CAG**GAAGAGATTGTATTAGATATTATAT
TTATTTCA**TTT**AAGATAATTTTCAAAGTTAATTTTCTAAATAAGATAAT**CTC**ATTTGTGTTTGTCTTTTAA**AG**
GCCAATAAAATATCTTT**CAG**TATCATTGTAATAATTTT**TT**AGAGTTTAATTTGTAAAGCTTAGCAAATAAAATCT
TGTA**CTAT**GAAATAGCTTCTTGCTTTATGACTTTAGGATTA**ACTTG**TAAAAAACATATCCTGAACTGAGATATGCA
AAATACTCATTTTCAAGTTATGGAAATGTGTTTGTGGCATATAGGACTGTGGGGTCTGTGTGTGTAGTGAGAGTG
TGTA**CCACT**ATTATAACTGGAATTTAATTTACATT**CATA**AACTACTATATTTCCCATCTTGCAAATCATTTTAT
GTCTCATCTGTTTTCTTT**CGG**TTATATCTTTGGTTTGAATACCAACATTTAA**AA**TGATGGTATTTTATCTTT
TAA**ACTT**AAAAATTTTAAATACAGCTATATGGACCTTATA**AA**ATTGATTTCTTATTTATTATTAGACATTACTA
CTAA**AGGT**TACATCTAACTATT**CAGG**GACATTTTCCATTTCCAAAAATAAAATTTATTATGCTTTATAACCTC
TTCTGTATTTTCTAATTTT**TT**CATTGTCTTTGATAAAATAAACAGTTT**TT**GT**TTT**GTCT

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FIGURE 1256

MDHHQPGTGTRYQVLLNEEDNSESSAIEQPPTSNPAPQIVQAASSAPALETDSSPPPYSSITVEVPTTSDTEVYGE
FYPVPPPYSVATSLPTYDEAEKAKAAAMAAAAAETSQRIQEEECPPRDDFSDADQLRVGNDGIFMLAFFMAFIFN
WLGFCLSFCITNTIAGRYGAICGFGLSLIKWILIVRFSYFTGYFNGQYWLWWIFLVLGLLLFFRGFVNYLKVRN
MSESMAAAHRTRYFFLL

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FIGURE 1257A

GCCTTATAAGTGGTTTGTAGTCTCAGTTGGCTCTAGTAACCAGAGGACACAGAAAGTATCTTTTGGAAAGTTTAGC
CACCTGTGCTTTCTGACTCAGAGTGCATGCAACAGTTAGATCATGCAACAGTTAGATTATGTTTAGGGTTAGGAT
TTTCAAAGAATGGAGGTTGCTGCACTCAGAAAATAATTCAGATCATGTTTATGCATTATTAAGTTGTACTGAATT
CTTTGCAGCTTAATGTGATATATGACTATCTTGAACAAGAGAAAAAACTAGGAGATGTTTCTCCTGAAGAGCTTT
TGGGGTTGGGAAGTATCTTTTTTAATTGCTGTACTACTTAACATTGTTCTAATTCAGTAGCTTGAGGAACAGGA
ACATTGTTTTCTAGAGCAAGATAATAAAGGAGATGGGCCATACAAATGTTTCTACTTTCTGTTGTGACAACATTG
ATTAGGTGTTGTCAGTACTATAAATGCTTGAGATATAATGAATCCACAGCATTCAAGGTCAGGTCTACTCAAAGT
CTCATATGGAAGTGAAGTTCTGCCTTTCTTTGATCGAGGGTCAAAATACAAAGACATTTTTGCTAGGGCCTAC
AAATTGAATTTAAAACTCACTGCCTGATTCTGAGCTTTTGGTTAGTATTCATGGCTAGAGTGAACATAGC
TTTAGTTTTGCTGTGTAAGAGTGTTCATAAGTTCACTCAAGAAAAATGCAGCTGTTCTGAACTGGAATTTTT
CAGCATTCTTTAGAATTTTAAATGAGTAGAGAGCTCAACTTTTATTCTAGCATCTGCTTTTGACTCATTCTAG
GCAGTGCTTATGAAGAAAAATTAAAGCACAAACATTCTGGCATTCAATCGTTGGCAGATTATCTTCTGATGACAC
AGAATGAAAGGGCATCTCAGCCTCTCTGAAGTTGTAATACTGTCCCCAGTTCTTCCATCGGTGTAGTTGTTGC
ATTTGAGTGAATACTCTCTTGATTTATGTATTTTATGTCCAGATTCGCCATTTCTGAAATCCAGATCCAACACAA
GCAGTCTTGCCGTTAGGGCATTTTGAAGCAGATAGTAGAGTAAGAACTTAGTGACTACAGCTTATTCTTCTGTAA
CATATGGTTTTCAAACATCTTTGCCAAAAGCTAAGCAGTGGTGAAAGTGAAGGAGGCATATTGCCCAAGGTTACAC
TGAAGCAGCTCATAGCAAGTTAAATATTGTGACAGATTGAAATCATGTTTGAATTTCATAGTAGGACCAGTAC
AAGAATGTCCCTGCTAGTTTCTGTTTGATGTTTGGTTCTGGCGCTCAGGCATTTTGGGAAGTGTGACAGGGT
GGAGTCAAAACAACCTACATATAAAAAGAGAAAAAGAGAACTTGTCCATTTAGCTTTTATAAGAAATCCCATGG
CAAAGGGTAATAAAAAGGACCTAATCTTAAAAATACAATTTCTAAGCACTTGTAAGAAGCCAGTGGGTTGGAGCC
TCCACTTTGTCCCTCCTTTGAAGTGGATGGGAAGTCAAGGTGCAAGAACCTGTTTGGGAAGAAAGCTTGGGGC
CATTCAGCCCCCTGTATTCTCATGATTTTCTCTCAGGAAGCACACACTGTGAATGGCAGACTTTTCATTTAGCC
CCAGGTGACTTACTAAAAATAGTTGAAAATTATTACCTAAGAATAGAATCTCAGCATTGTGTTAAATAAAAAATG
AAAGCTTTAGAAGGCATGAGATGTTCTATCTTAAATAAAGCATGTTTCTTTCTATAGAGAAATGTATAGTTTG
ACTCTCCAGAATGTACTATCCATCTTGATGAGAAAAGTCTTAAATAGTACCAAACATTTTGAAGTTTAAATTATG
TATTTAAAGTGAGTGTTTAAGAACTGTAGCTGCTTCTTTTACAAGTGGTGCCTATTAAAGTCAGTAATGGCCAT
TATTGTTCATTGTGGAAATTAAATTATGTAAGCTTCTAATATCATAAACATATTAAATTTCTTCTAAATATT
GCTTTTCTTTTAAAGTGACAATTTGACTATTCTTATGATAAGCAGATGAGAGTGTCTTACATTTTCCAAAAGCAGG
CTTTAATTGCATAGTTGAGTCTAGGAAAAATAATGTTAAAGTGAATATGCCACCATAAATTACTTAATTATGTT
AGTATAGAACTACAGAATATTTACCCTGGAAAGAAAAATATTGGAATGTTATTATAAACTCTTAGATATTTATAT
AATTCAAAAGAAATGCATGTTTCACATTGTGACAGATAAAGATGTATGATTTCTAAGGCTTTAAAAATTATTCTA
AAACAGTGGGCAATAGATAAAGGAAATTCTGGAGAAAAATGAAGGTATTTAAAGGGTAGTTTCAAAGCTATATATA
TTTTGAAGGATATATTCTTTATGAACAAATATATTGTAATAATTTATACTAAGGTATCTGGTAACTGTGGGATT
AATATGGTTCGAAAACAAATGTTATGGAGAAGCTGTCCCAAGCAAATAAATTACCTGTACTTTTTTCCCATTTCA
AGGGAAGAGGCAACCACATGAAGCAATACTTCTTACACATGCCAAGAACGTTTATTGAAAAATAAATTTTTTAA
AAGGCATGTGTTTCTATGCCACCAATACTTTTGAATAATGTGAACCTTACCCAAAACCATTTATCATGTCCAT
TAAGTATATTTGGGTATATAATTAGGAAGATATTTACATGTTCCATCTCCACAGTGGAAAACTTATTGAGGCTA
CCAAAGTGTGCCAAGAAATGTAAGTCTTAGAGTAATTAGAAATGCTGTTTTCTCAAAGCATGAGAACTAGC
ATTTTCATTTCTTATTTACTCCCTTTCTATATCAATGCAATTCACAACCCAATTTTAAATACATCCCTATATCTCA
AGCATTTCTATCTTGTACTTTTTTCAGAAAATAAACCACAAAAATAATCCTTGGTCTCTCTATCTTCTGACCTGTAA
GCAACAGAAATGTAAAAACAGAAGGGGTCCAATTTTACACGTTTTTTTCTCAAGTAGCCTTTCTGGGGATTTTT
ATTTTCTTAATGAAGTGCCAAATCAGCTTTTCAAATGTTTTCTATTTCTCAGCATTTCAGGAAGTGATAACGTT
TAGCTAAATGAGTAGAAGTGGACTTCTTCAACATATTGTTACCTTGTCTAGCCTTAGGAAGAAAAACAAGAGCCA
CCTGAAAATAAATACAGGCTCTTTTTCGAGCATCTGCTGAAATACTGTTACAGCAATTTGAAGTTGATGTGGTAGG
AAAGGAAGGTGACTTTTCTTGAAAAGTCTTTCTAAACATTACACTGTCCTAAGAGATGAGCTTTCTTGTTTTA
TTCCGGTATATTCCACAAGGTGGCACTTTTAGAGAAAAACAAATCTGATGAAGACTAAAGAGGTACTTCTAAAG
AGATTTTATTCTAACTTTATTTTTCTGCGCATATTTAACTCTTTCTAGCACTTGTTTTTTGGGATGATTAATAG
TCTCTATAATGTTCTGTAAGTTCAATATTTTACTTGTACCTAGGTTCTGAACAATTGTCTGCAATAAATGTT

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FIGURE 1257B

CTTAAGGATGGATAATACACCCATTTTGATCATTAAAGTAAAGAAAGCCTAGTCATTTCATTTCAGTCAAGAAAAA
TTTTTGAAGTACCCAGTTACCTTACTTTTCTAGATTAAAACAGGCTTAGTTACTAAAAAGGCAGTCCTCATCTGT
GAACAGGATAGTTTTCGTTAGAAGTATAAACTCCTTTAGTGGCCCCAGTTAAAACACACATACCTCTCTGCTGC
TTTCAAATTCCTAGCATGGTGGCCTTTCAACATTGATTAAATTTTAAAATCCTAATTTAAAGATCAGGTGAGCA
AAATGAGTAGCACATCAGTAATTCAGTAGACAAAACCTTTGTCTGAAAAATTGCTGTATTGAAACAGAGCCCTAA
AATACAAAAGACCAGGTAATTTTAAACATTGTGGAATCACAAATGTAAATTCATAAGAAGCTCTAATTAATAA
AAAAAGTCTGAAGTATATGAGCATAACAACCTTAGGAGTGTGTCTACATACTTAACCTTTTGAAGTTTTTGGCAAC
TTTATATACTTTTTTTTAAATTTACAAGTCTACTTAAAGACTTCTTATACCCCAAATGATTAAAGTTAATTTAGAG
GTCACCTTTCTCACAGCAGTGTCACTTGAAATTTAGTAGGGAAGGATATTGCAGTATTTTTCAGTTTTCCTTAGCA
CAGCACCACAGAAAGCAGCTTATTCTTTTGAGTGGCAGACACTCGACGGTGCCTGCCCCAATTTCTCTCTGAGT
GGCAAGCAGATGAGTCTCAGTAATTCATACTGAACCAAATGCCACATACACTAGGGGCAGTCAGAACTGGCTG
AGAAATCCCCCGCTCATTGCCCCCTCTGCTCCAGGAAGTAAAGCCCCCTATGCGAAAGGCCGA
ATTCCACCCCAGGGTTTGTATAACAGTGGCCAGTCTGAACCCATTTGCTCGTGCTCAAACTTGATTCCCACT
TGAAAGCCTTCCGGGCGCGCTGCCTCGTTGCCCCGCCCTTTGGCAGGAGAGAGGCAGTGGGCGAGGCCGGGCTG
GGGCCCCGCTCCCACTCACCTGCCGGTGCCTGAAATTATGTGCGCCCCGCGGGCTGCTTTCCGAGGTGAGAGT
GCCCTGCTGCTGTCTCAGAGGCATCTGTTCTGCAAATCTTAGGAAGAAAAATGTCCCTAGTAGCAAACGGGTGTC
TTCTGTGCATAAATAAGTACAACACAATTCTCCGAAAGTTCCGGGTAAAAAGAGATGCGGTAGCAGCTGCCCTGTG
TGAAGCTGTCTACCCCGCATCTCTCAGGCGCTAAGCTCAGTTTTTGTGTTTTGTTTTGTTTTTAAAGAAAAGA
TGTATAATTGCAGGAATTTTTTTTATTTTTTATTTTCCATCATTCTATATATGTGATGGTGAAAGATATGCCT
GGAAAAGTTTTGTTTTGAAAAGTTATTTTCTGCTTCGTCTTCAGTTGGCAAAGCTCTCAATTCCTTAGCTTCC
AGTTTCTTTCTCTCTTTTCTTTGTTAGGTAATTAAGGTATGTAAACAAATTATCTCATGTAGCAGGGGATTT
TCATGTTGAGAGGAATCTTCCGTGTGAGTTGTTTGGTCACACAAATAACCTTTCTCAATTTTAGGAGTTTGGAT
TGTCAAATGTAGGTTTTTCTCAAAGGGGGCATATACTACATATTGACTGCCAAGAACTATGACTGTAGCACTAA
TCAGCACACATAGAGCCACACAATTATTTAATTTCTAACTCTCTGTGGTCCCTAGAAAAATTCGGTTGATGTGCT
TAGGTTAAAGTTCTGAAGATACCCGTTGTACCCTTACTTGAAAGTTTCTAATCTTAAGTTTTATGAAATGCAATA
ATATGTATCAGCTAGCAATATTTCTGTGATCACCAACAACCTCTCAGTTTGATCTTAAAGTCTGAATAATAAACA
AATCCCAGCAGTAATACATTTCTTAAACCTCACAGTGCATGATATATCTTTTCATTCTGATCCTGTGTTTGCAAA
AATATACACATGTATATCATAGTTCCTCACTTTTTATTCATTTGTTTTCTATTACCTGTAGTAAATATATTAGT
TAGTACATGGAATTTATAGCATCAGCTACCCCCAGGAACAGCACCTGACAGGCGGGGGATTTTTTTTCAAGTTGT
TCTACATTTGCATAAATTATTTCTATTATTATTCATGTATGTTATTTATTTCTGAATCACACTAGTCCCTGTGAAA
GTACAACTGAAGGCAGAAAGTGTTAGGATTTTGCATCTAATGTTTATTATCATGGTATTGATGGACCTAAGAAAA
TAAAAATTAGACTAAGCCCCCAAATAAGCTGCATGCATTTGTAACATGATTAGTAGATTGAAATATATAGATGTA
GTATTTTGGGTATCTAGGTGTTTTATCATTATGTAAAGGAATTAAAGTAAAGGACTTTGTAGTTGTTTTTATTAA
ATATGCATATAGTAGAGTGCAAAAATATAGCAAAAATAAAAACTAAAGGTAGAAAAGCATTTTAGATATGCCTTA
ATTTAGAACTGTGCCAGGTGGCCCTCGGAATAGATGCCAGGCAGAGACCAGTGCCCTGGGTGGTGCCTCCTCTTG
TCTGCCCTCATGAAGAAGCTTCCCTCACGTGATGTAGTGCCCTCGTAGGTGTATGTGGAGTAGTGGGAACAGGC
AGTACTGTTGAGAGGAGAGCAGTGTGAGAGTTTTTCTGTAGAAGCAGAACTGTCAGCTTGTGCCTTGAGGCTTCC
AGAACGTGTGAGATGGAGAAGTCCAAGTTTCCATGCTTCAGGCAACTTAGCTGTGTACAGAAGCAATCCAGTGTG
GTAATAAAAAGCAAGGATTGCCTGTATAATTTATTATAAAATAAAAGGGATTTTAACAACCAACAATTTCCAACA
CCTCAAAAGCTTGTTGCATTTTTTGGTATTTGAGGTTTTTATCTGAAGGTTAAAGGGCAAGTGTTTGGTATAGAA
GAGCAGTATGTGTTAAGAAAAGAAAAATATTGGTTCGCGTAGAGTGCAAATTAGAACTAGAAAGTTTTATACGAT
TATCATTTTGAGATGTGTTAAAGTAGGTTTTCACTGTAAATGTATTAGTGTCTGCTGATTGCCATAGGGCCTGG
TTAAACTTTCTCTTAGGTTTCAGGAAGACTGTCACATACAGTAAGCTTTTTCTCTGACTTATAATAGAAAA
TGTTTTGAAAGTAAAAAATAAATCTAATTTGGAATTTGACTTGTTAGTTTCTGTGTTTGAATCATGGTTC
TAGAAATGTAGAAATTGTGTATATCAGATACTCATCTAGGCTGTGTGAACCAGCCCAAGATGACCAACATCCCCA
CACCTCTACATCTCTGTCCCCTGTATCTCTCTTTCTACCACTAAAGTGTTCCCTGCTACCATCTGGCTTGTC
CACATGGTGCTCTCCATCTTCCCTCCACATCATGGACCACAGGTGTGCCTGTCTAGGCCTGGCCACCACTCCCAAC
TTGACCTAGCCACATTCATCTAGAGATGGTTCTGTATGCTGGGCACAGACTGTGCTCATGGCACCCATTAGAAAT

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FIGURE 1257C

GCCTCTAGCATCTTTGTATGCATCTTGATTTTTAAACCAAGTCATTGTACAGAGCATTTCAGTTTTGGCTGTGGTA
CCAAGAGAAAACTAATCAAGAATATAAACACATTCCAGGCTGCTGTTTTCTCTCCATCTACAGGCCACACTTT
TACTGTATTTCTTCATACTTGAAATTCATTCTGCTATTTTCATATCAGGGTACAGACTTATAAGGGTGCATGTTT
CTTAAAGGTGCATAATTATTCTTATTCCGTTTGCTTATATTGCTACAGAATGCTCTGTTTTGGTGCTTTGAGTTC
TGCAGACCCAAGAAGCAGTGTGGAAATTCAGTGCCTGGGACACAGTCTTATAAGAATGTTGGCAGGTGACTTTGT
ATCAGATGTTGCTTCTCTTTTTCTCTGTACACAGATTGAGAGTTACCACAGTGGCCTGTCGGGTCCACCCTGTGGG
TGCAGCACAGCTCTCTGAAAGCAAGAACCTTCCTACCTATTCTAACGTTTTTGCCCTCTAAGAAAAATGGCCTCA
GGTATGGTATAGACATAGCAAGAGGGGAAGGGCTGTCTCACTCTAGCAACCATCCCTCCATTACACACAGAAAGC
CCTCTTGAAGCAAAAGAAGAAGAAAGAAAGCTTATCTCTAAGGCTACTGTCTTCAGAATGCTCTGAGCTGA
ATGCTCTTGCTCCTTTCCCAAGAGGCAGATGAAAATATAGCCAGTTTATCTATACCCTTCCTATCTGAGGAGGAG
AATAGAAAAAGTAGGGTAAATATGTAACGTAAAATATGTCATTCAAGGACCACCAAACTTTAAGTACCCTATCAT
TAAAAATCTGGTTTTAAAGTAGCTCAAGTAAGGGATGCTTTGTGACCCAGGGTTTTCTGAAGTCAGATAGCCATT
CTTACCTGCCCCCTTACTCTGACTTATTGGGAAAGGGAGAACTGCAGTGGTGTTTCTGTTGCAGTGGCAAAGGTAA
CATGTCAGAAAATTCAGAGGGTTGCATACCAATAATCCTTTGGAACTGGATGTCTTACTGGGTGCTAGAATGAA
AATGTAGGTATTTATTGTCAGATGATGAAGTTTATTGTTTTTTTCAAAATTGGTGTTGAAATATCACTGTCCAAT
GTGTTCACTTATGTGAAAGCTAAATTGAATGAGGCAAAAAGAGCAAAATAGTTTGTATATTTGTAATACCTTTTGT
ATTTCTTACAATAAAAAATATTGGTAGCAAATAAAAAATAAAAAACAATAACTTTAACTGCTTTCTGGAGATGA
ATTACTCTCCTGGCTATTTTCTTTTTTACTTTAATGTAAATGAGTATACTGTAGTGAGTAAAATTCATTAAAT
TCCAAGTTTTAGCAGAAAAA

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FIGURE 1258

PYKWFS AQLALVTRGHRKY LLESLATCAF

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FIGURE 1259

GGGGCGGAGAGAGGGCGAGCACCGGGAAGGGGAGCGTGGGGCCGCTGGAATGGGTGAATTTAAGGTCCATCGAGTA
CGTTTCTTTAATTATGTTCCATCAGGAATCCGCTGTGTGGCTTACAATAACCAGTCAAACAGATTGGCTGTTTCA
CGAACAGATGGCACTGTGGAAATTTATAACTTGTTCAGCAAACCTACTTTTCAGGAGAAATTTTCCAGGTCATGAG
TCTCGGGCTACAGAAGCTTTGTGCTGGGCAGAAGGACAGCGACTCTTTAGTGCTGGGCTCAATGGCGAGATTATG
GAGTATGATTTACAGGCGTTAAACATCAAGTATGCTATGGATGCCTTTGGAGGACCTATTTGGAGCATGGCTGCC
AGCCCCAGTGGCTCTCAACTTTTGGTTGGTTGTGAAGATGGATCTGTGAACTATTTCAAATTACCCCAGACAAA
ATCCAGTTTGAAAGAAATTTTGATCGGCAGAAAAGTCGCATCCTGAGTCTCAGCTGGCATCCCTCTGGTACCCAC
ATTGCAGCTGGTTCCATAGACTACATTAGTGTGTTTGATGTCAAATCAGGCAGCGCTGTTTATAAGATGATTGTG
GACAGGCAGTATATGGGCGTGTCTAAGCGGAAGTGCATCGTGTGGGGTGTGCCTTCTTGTCCGATGGCACTATC
ATAAGTGTGGACTCTGCTGGGAAGGTGCAGTTCTGGGACTCAGCCACTGGGACGCTTGTGAAGAGCCATCTCATC
GCTAATGCTGACGTGCAGTCCATTGCTGTAGCTGACCAAGAAGACAGTTTCGTGGTGGGCACAGCCGAGGGAACA
GTCTTCCATTTTTCAGCTGGTCCCTGTGACATCTAACAGCAGTGAGAAGCAGTGGGTGCGGACAAAACCGTTCCAG
CATCACACTCATGACATGCGCACTGTGGCCACAGCCCAACAGCGCTGATATCTGGAGGCATGACACCCACTTA
GTCTTTTCGTCTCTCATGGAGAAGGTGGAAGTAAAGAATTACGATGCCGCTCTCCGAAAAATCACCTTTCCCCAC
CGATGTCTCATCTCCTGTTCTAAAAAGAGGCAGCTTCTCCTCTTCCAGTTTGCTCATCACTTAGAACTTTGGCGA
CTGGGATCCACAGTTGCAACAGGCAAGAATGGGGATACTCTTCCACTCTCTAAAAATGCAGATCATTTACTGCAC
CTAAAGACAAAGGGTCTTGAGAACATTATCTGTAGCTGTATCTCCCCATGTGGAAGTTGGATAGCCTATTCTACA
GTTTCTCGGTTTTTTTCTCTATCGGCTGAATTATGAACATGACAACATAAGCCTCAAAGGGTTTTCCAAATGCCA
GCATTCCTTCGCTCTGCCCTTCAGATTTTGTGTTTCTGAAGATTCAACAAAGCTCTTTGTAGCATCAAATCAAGGA
GCTCTGCATATTGTTTCAGCTGTCAGGAGGAAGCTTCAAGCACCTGCATGCTTTCCAGCCTCAGTCAGGAACAGTG
GAGGCCATGTGTCTTTTGGCAGTCAGTCCAGATGGGAATTGGCTAGCTGCATCAGGTACCAGTGCTGGAGTCCAT
GTCTACAACGTAAAACAGCTAAAGCTTCACTGCACGGTGCCTGCTTACAATTTCCAGTGACTGCTATGGCTATT
GCCCCAATACCAACAACCTTGTCTATCGCTCATTTCGGACCAGCAGGTATTTGAGTACAGCATCCAGACAAACAG
TATACAGATTGGAGCCGGACTGTCCAGAAGCAGGGCTTTCACCACCTTTGGCTCCAAAGGGATACTCCTATCACA
CACATCAGTTTTTCATCCCAAGAGACCGATGCACATCCTTCTCCATGATGCCTACATGTTCTGCATCATTGACAAG
TCATTGCCCCTTCCAAATGACAAAACCTTACTCTACAATCCATTTCTCCACGAATGAATCAGATGTCATCCGG
AGGCGCACAGCTCATGCTTTTAAATTTCTAAGATATATAAGCCTCTACTCTTCATGGATCTTTTGGATGAAAGA
ACACTCGTGGCAGTAGAACGGCCTCTGGATGACATCATTGCTCAGCTCCACCACCCATTAAAAAGAAGAAATTT
GGAACCTTAAAACAGGGCACTGTCTGTGTCCTTCCTTGAAGTGTCTACCCTGTTGCTTTTACAAATCATGGTAAT
AAAACAAGTTATTCTTG

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FIGURE 1260

MGEFKVHRVRFFNYVPSGIRCVAYNNQSNRLAVSRTDGTVEIYNLSANYFQEKFFPGHESRATEALCWAEGQRLF
SAGLNGEIMEYDLQALNIKYAMDAFGGPIWSMAASPSGSQLLVGCEGDSVKLFQITPDKIQFERNFDRQKSRLS
LSWHPSGTHIAAGSIDYISVFDVKSGSAVHKMIVDRQYMGVSKRKCIVWGVAFSLDGTIISVDSAGKVQFWD SAT
GTLVKSHLIANADVQSI AVADQEDSFVVGTAE GTVFHFQLVPVTSNSSEKQWVRTKPFQHHTHDMRTVAHSPTAL
ISGGTDTHLVRPLMEKVEVKNYDAALRKITFPHRCLISCSKKRQLLLLQFAHHLELWRLGSTVATGKNGDTLPL
SKNADHLLHLKTKGPENIICSCISPCGSWIAYSTVSRFFLYRLNYEHDNISLKRVS KMPAFLRSALQILFSEDST
KLFVASNQ GALHIVQLSGGSFKHLHAFQPQSGTVEAMCLLAVSPDGNWLAASGTSAGVHVYNVKQLKLHCTVPAY
NFPVTAMAIAPNTNNLVIAHSDQQVFEYSIPDKQYTDWSRTVQKQGFHHLWLQRDTPITHISFHPKRPMHILLHD
AYMFCIIDKSLPLPNDKTLLYNPFPPTNESDVIRRRTAHAFKISKIYKPLLFMDLLDERTLVAVERPLDDIIAQL
PPPIKKKKFGT

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FIGURE 1261

GAATTCGGCACGAGAATGAGCCCCACAGAATAAAGGTTTTTCTCTTGCTGTGGCCTACTGGAAGCCTTCCTAAC
TCTATAGCTGGTAAAGTAGAGCAGAAAGGGCCAGAATGGCTTAAGATGGAGCTAAATCCCTATAGCATTCCATTT
TCTGCTCTTGCCCTCTTGAACCTAGAAAGGCTTGCCCATATATCCTAACAATCTGTTCTCTGAGCTGTTAGGCCAAT
CCCTGGTCTCAAACCTCTGACCTCAGGTGATCCACCCACTATGGCCTCCCAAGGTGCTGGGATTGCAGATGTGAG
CCACCGTGCCCTGGCCAGAAAATCTGGATTCTTATTCTAGTTCTTCATTTCTGTACATGCACTTAGTTGACATT
ACATCTACATATATTAGCTTTTTCTACATGAGCCATCTATTTACTTAGTAACCAGTGTCTTAATGAAGTATTT
AGTCTTGGGTTTCTGTAAAATTTCTCTGCATTCCCTTAGACAGTGTACTATACATGAAATATTCTTGTTGACCTA
GTAATTTATATTATTCATTTAATTCTTAAACCTATGGCCTTTTTATTGAGCACACTCTTAAATCATTATTTGGC
TTGTAAACATTTCATCTGAATTGTGGCTACAATCCTCTTTAAATAATCTAGGAAAAAGAAAGATAAAGCTTACAT
TTTCACAGTTTGGCTCTTAAACACATTCCACAAATGCCATTAAGAATTTATTTTGTTTTAGGCCAGTCATGGTG
GCTCATGCCTGTAATCCCAGCAATTTGGGAGGCTGAGGCAAGAACTGCTTGAGCCCAGGAGTTTGAGACTAGCCT
GGGCAACATAGCAAGACCTGTCTCTACCAAAAAAAAAAAGTTTATTTTGTTTTAGAGTCATTTAATGTGTTTT
TATGCACAATAATAGTGGGAGGTTGTTTTGTGTCATTTGTTTGTGTTTTGTTTTGTTTTGTTTTGTTTTGCTTCCAT
GTGGGAAAAAGTTAACATTGGAAGTGTCTAGTAAAGATTTTTTTCAGGCTGGGCACGGTGGCTCATGCCTGTG
ATCCCAACACTTTGGGAGACCGAGGGAGCTGGATCACCTGAGGTCAGGAGTTTCGAGACCAGCCTGGCCAACATGG
AAAAACTCCATCTCCACTAGAAATACAAAAGTAGCCTGGTGTGGTGGCACATGCCTGTAATCCCAGCTACTTGGG
AAGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCAAGATCACGCCATTGCCTCCA
GCCTGGGCAACAAGAGTGAAACTCCGTCTCAAAAAAAAAAAAAAAAAAAGATGTTTTTCATTTTTTCATGTTATC
TATCCAAGCACTGTTCCATGGTCAGCAAGTCATATTTTATAATGTGGATTTTCCAAAATAATTATTGAATACAGC
TATTTCTATGGCTACTTTTAGTGTTTTTGTGGTATGTGGTGTGGGAGTGTTTATGGAATTACCAGTATCTTAAATT
TTCAAAGGAACCTTGGAAGTCTATCACTCTAAATGAAAGTCTGTCACTCTACATGAATTATGTGCTCAAAATTTGA
CCAACTCAGTTTAAGACACAAAACAGTAATTTGAAGAAGGAAAAATGAAGAGAGTTTCTAGTTTAATGGGTTAA
TTTTTGTGTTGCAATAGTAAGTTTAGTCTTCTTATAATATTTCTAAATGAAAAATCATAGGTATTTGTTACCAT
GTGTGAAGATTACTTTGTTAAAAGCAAAAGTGGTCGTGTGATATGCTAAATGTTAATTACTGATTTTATATGTTT
AAATCACGCCAAACAAATTATGTCTGTGCCATCCAGGGTCTGTTGTTAATCTTTTTCTGAGTACTTGGATTGGGA
TAAAGGGCTTGTAATATGCACTTTTTATTAATGAATAAATAGAAAACGTTAGTAACACTTTGTGTTTTCTGTTTG
GCTTTTGTGGGAAGAGAAGCAAGCATCTTTTGCCTAGTAGATGTTAACATTGTGTATTAAACAGTTTCTTTGTAA
GACCTAACTAAAGACATTCCCTAAGAGAGAACTTAAGTTTTAAGAAAAGTTGTGAGAAAAATATTCATAAAATATG
CAGTATGGGGCCAGTATTCAGAAGTAGAGTTTCTCTCTTGGAATTAGATTGCAGTCACATTTCTTTGGTTATTT
TCTTTCTCTCTCTCTTCCCTAGAATACCAGGTAAAATAGACATTTACTTTGAGGGACTAATATCCAATAGTGTTAA
TTATTTAAGCAGATATATCTAGCTCAAAAGGAACCAGACATGTCACTGTACCAAAAACACACAAAAGTGAAAATT
TGCTTCTGTTCTGTGACCTAGAATGTGTCCAGACATTAAAGATCATGAATACTCATATACATGTAAAAATAGTAA
CACTGCTCTGGCATGATTTTGACGTCAGTGTTTATGTAATAACTTCAGTGTTATATTTAAATAGATAAATTTGT
GAAATAACAATTTCTTGAGACAGTCACTTTTTATGATTTAATCTAAAGATTGTCATGTACATGTCAACGGATA
TCTGAATCCTCAGTGAACTGTAAAGTTTTTATTAAATGACTCTGCTGCAATACTAGTTTTCTTCTCAGAAAATG
GAATTCAAATAAAATAAGTTTTTGGTCTTGGAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1262

MHLVDITSTYISFFLHEPSIYLVTSVLNEVFSLGFLVKFLCIP

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FIGURE 1263A

AGCGGCCGCCAACGCCGCCCGGACTGGAGCCCTGACATTGCTGCGCTCGGGGGGCTCCAGGCAGCCCGTATCGGG
GCCTTTATTTCTCGTCGGCGGGCGCCCTGCACCGCGCCTCGCAAAGCCAAACACCAGAGCACCCTAGAAGGTTTAA
CTAAAAGAATGCTCATGTTTGACCCAGTTCTGTCAAGCAAGAGGCCATGGACCCTGTCTCAGTGTATACCCAT
CTAATTACATGGAATCCATGAAGCCTAACAAGTATGGGGTCATCTACTCCACACCATTGCCTGAGAAGTTCTTTC
AGACCCCAAGAAGTCTGTGCGACGGAATACAGATGGAGCCAGTGGACCTCACGGTGAACAAGCGGAGTTTACCCC
CTTCGGCTGGGAATTCGCCCTCTCTCTGAAGTTCCCGTCTCACACCGGAGAGCCTCGCCTGGGTTGAGCATGC
CTTCTTCCAGCCCACCGATAAAAAATACTACCCCCCTTCTCCAGGCGTGCAGCCCTTCGGCGTGCCGCTGTCCA
TGCCACCAGTGATGGCAGCTGCCCTCTCGCGGCATGGAATACGGAGCCCCGGGGATCCTGCCCGTCATCCAGCCGG
TGGTGGTGCAGCCCGTCCCCTTTATGTACACAAGTCACCTCCAGCAGCCTCTCATGGTCTCCTTATCGGAGGAGA
TGGAAAATTCAGTAGTAGCATGCAAGTACCTGTAATTGAATCATATGAGAAGCCTATATCACAGAAAAAATTA
AAATAGAACCTGGGATCGAACCACAGAGGACAGATTATTATCTGAAAGAAATGTACCCCCCTTAATGAACTCAG
TGTCACCCCGCAAGCATTGTTGCAAGAGAATCACCTTCGGTCATCGTGCAGCCTGGGAAGAGACCTTTACCTG
TGGAAATCCCCGATACTCAAAGGAAGCGGAGGATACACAGATGTGATTATGATGGATGCAACAAAGTGACACTA
AAAGCTCCCACTTGAAAGCACACAGAAGAACACACACAGGAGAAAAACCCTACAAATGTACATGGGAAGGGTGCA
CATGGAAAGTTTGCTCGGTCTGATGAACTAACAAGACATTTCCGAAAAACATACTGGAATCAAACCTTTCCAGTGCC
CGGACTGTGACCGCAGCTTCTCCCGTTCTGACCATCTTGCCCTCCATAGGAAACGCCACATGCTAGTCTGATTGC
CTCTGTGTCTGCTCAGCGTGAATCTCCCACTCACCTGGCTCTCTCTGTCTGCTGCTGCCCTCCATTATCTAACACAT
TTTTTACATGTACATTTTAATTTGATTAGCTGGTCTGAATCTCTGAATTTATATCATCCAAACTTCCATATGG
TCAGTAGTAGATGTTCTCTAATCCTCCCTCTCCTTACCACGGGTGAGACCTAAAGAATGTGAACACTTTTTTTTT
TTTTTCTGGGGATGCTAAGCAAACCTTCTTACAGATACGTTTAATGTAATAAGAACAAGGGAACATGTAAACTA
ACATAACCAATTGTGAGTTCTCCATGTATTCTCCTCAAAGAATGTGAGAGTAAATGTATTAGAAATACAGTATCCA
GACTGCTAGTCTTGCCAGAGACATTCTTACCTCTGCCCTGTGATAATATTTATGCTTGACAGTGAAAACAAGT
GTGGCCCCCTTGACCGGTTAGCTAGAAGTACAGCCAGATTTCAAGCTAGTGCAGTCACCTCTTCCGTCATTCTTC
ACAAATCTTGTAACCTGGATCTTAGACTTCATCTGAATCGAGTTCTTTGCCCTCCTTTGTGCTGCAGCTCATA
TGGAGGTCTTTGCCACCAATGGGAGATGAGCCCAAACCTTCGATCTAGGTGGGTGATGTGTAGCAGTTCAAGGGA
AGGGTGCTGTGTTTTCATAGCATGGAGTCTGGAGGAGAGGGCCATTTAGCAGGGGGAGCAGAAGAGGCAATTCCTC
CTGGGCTAGGGGTTGTCAATGAGGTTTCAACATTTTGTTAGCTGTGTGCAGCATTCCCAGAGCTTCAGTCTCTGT
GCATACTCAGCTTTGTAGAACCATGCTGCAAAGCCATATACCGATGGGGTTATCCATGCAACTATCTCCATTCTT
ACAATGTCCTTAATATGAGATCATCAAACATTGATAGTAGGGACTCCATGGAATATTTGCCCAGTAATGGTAAGA
AATCTTTCGGGTAAGAGTATGGATGGTTCTTCTTTTACCCAATCTGCTTATAGCTTTTTTTGTAAACAGGGAAAT
GTTGAGTGGTACTTGTATTCCCTTATCAAATTAATCACATAGCTTTTATACAGAACTCTTCTGTGTGAGCTGT
TAAGGTGCCAAATTGGCTGTCAATTTGTATTTCATGACACATACCATAAAGCATCTGCTAATGCTTTAATGGATTGA
TTCAATTAAGACCTGAGTGACACTATTTGTAAATATAACTAGTTGTGAAGCACACATACCTTTATTTTGGGAATT
TATGAGAAAAATAGAAAACCACAGATCAGGGATTATATATGTAGCTCAAAAATTCCCAAAAGTTTACTGTTAG
AGTTGGCAATTTCTATCACTATTTAGTGTGAGAACAACTGAAAAATAATGGCTCGTGTTTATGTTGAAGATAA
ATAGCACCATTATTGGGGGAAGTTATTCAAAGCAGGCTTTTGAGCACCATAGTCTAAATGCCAATAAAAAATAAT
TCATACATAGAAATGTCATTGGTCTCTGAATTTGAAGAAAGTGAGCAACAGTAGTTAAATGTGGGTGCATATAACC
AAATTCCTTCATCAAGAATGGAGGAGAAGAGAGAAGAATGAAATCCTGAAGATTCATCCAGCCGCAACTCAG
GATCCAACACAACCTTTAACTGGGAGGAATACATTGTTTGATCATTTTTTAAACATCTGTGAATGAGTGATTCCGG
AGGCCTGTGAATTGTGTGGGGAGCTTGCTTTGATGGCACTGTGTTAATAAAAGTTGTAGGGACTGTGCACCTAAG
AGGCTAAGAGGTCCCACTCATCCGCCCTGTGAACCAGCTGTAAAGAAATGTAGTTAAGAAATGCAAAGAAATGTG
TTATCTTGGCATTGGGTTTGATTTTCTTTTTTAAAGCACTGCAAACTTCTTTAGGATACTAAACATCCTA
ATTGGGCTGTTTTTTGTTTTGTTTTGTTTTTTCAGCTAAAGGCAAAGATAATTTTTTTTTTTCAGCTGAAGTTTTTC
TTTTTGCACCTATGACATGAATTGAGTGATAAAATGGCTCTTTGAAAAGTAGATATTGTCTGTATTGTAAATGC
TTAGTCATATTCATGGCAAAGTGTTTCTTTGAGATGGTTCTTTCACAACACACAAGAATCAAGATGGAACGC
AAGGAAAATCTTTTTGTTTTGACCGAGGTAACAGTTTATGTGTGTTCCAATCCATAGAGAAGTGGGGGAAAGGG
CGAGAAAGGATCAGATTGATCTGGGATCAGCTTTGAGCCTGAGTTCAGTGAATAGCCTCATGGGCATCTCATGGA
ATTGATGCATTGTGCTGTGGCATATTTAAATTTTGTTCAAAAGATTGAAGCAAGACCTTGCAAAGACTCTTAACA

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FIGURE 1263B

TTACTGTTTCAGCTTGCTTAGATTGTGTTAACAGTTTCATTTAACAAAGATCCGTTTTAACTCTGAACAAAAGCAAC
CCAGAGCGGCCATTCTCTATTCCCATGCTGGTCAATACGCTTTTCATTACCAATTGGCCCTTACCAAACTTTTCTT
ATATATATATTTGTATTTTACTATGATAGTTGAGAAATTTAGCCTCTTAGTCATTTTTAGCTGTTATTGTGGAAG
ACCTCAAATACAAGATTAGATGCCCTTGAACATGTTTTAATGATGTGTGTCATGTTACTATCAATGGTGATTTC
ATCGCAATATTTTAAATTGATGAGAATGATTTGTAAACATGAAGTTACTATTACGTAAATTCTGTTTGTATAGA
GTTTCTTCAGTTGTTACCCAAGTGTCATCCTAGAGAAGTCAGAAGAATCAGAATCCATCGTATTTTAGAGTTATG
TGAATCTACATCATAAATGGGCATTAACATTCTAAATTGCTTGGTTTGGAGAATGTGTTAGCAGCATAGCTATAT
TCAACTAGGGAGATGCTAAATACACAGAAGTTTCAAGAGCCTTGGAACAGAATTACAGGGGAACATATATATGTAT
ATGTATATTTTATTAAACACCCATCTGCACATCAGTATTGCACTAATGTGGAATTTGAAAGACTATTTTGCTGA
TACTGTATATATGCGCATCATTCCTGATTAGATTGTTGTAAAGACAATCTGAAAGATCTAAGGTTTTAAATAAT
TTGGTTTGAAAATATACAGTTGTCTTGAAGGAATTGCTGTCATACATGAAGTTGCTCCGAGCTGTCTTTATTCTC
TTCTTGGTCAAGGTTAAACAATTGCTAAATGATCGCAAATTCACCTAAACAATACATTTACAAAGCCATCTTTACA
TGCATTAAACGAGGGCTACAACAATATTGTTTTACAAATACTAGCACTTTTTTTTCTGTTATGTACTTAGTGTTA
GAGGGTCAAAAATAATCTTTCTGCTTAGCATCTCTTAAACCATACTGCAAATATAGCAGGATTATTACATTTACA
GTACTTTAATACTTGTATAAACTATGCAGAAATTTTTAATAAAGTGTAATATATTTTATAAGCTAATAAGACTGA
ATGGGTAAAGGTTTTTAGCATGCGTTAGTATACTTGCAGATACTGAAACATTTTGGTAATCTTTCTTACTAAAGA
TGTGAATGTTTAAATGTACCTTCTCTGTTTCTACTCTGTAGTCCAATGGGAATTCAGTAATGACATTTTGTATGT
CAAACGTGTAACATAAATTTGTACTGTACAGTCCTCATATACTATATACAGTATGCAATATATATTATATACTTG
TTAATAAAACCATCAGAATATTAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCAGGAATTC
GATATCAGC

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FIGURE 1264

MLMFDPVPVKQEAMDPVSVSYPSNYMESMKPNKYGVIYSTPLPEKFFQTPEGLSHGIQMEPVDLTVNKRSSPPSA
GNSPSSLKFPSSSHRRASPGLSMPSSSPPIKKYSPSPGVQPFQVPLSMPPVMAAALSRHGIRSPGILPVIQPVVV
QPVPFMYTSHLQQPLMVSLSEEMENSSSSMQVPVIESYEKPI SQKKIKIEPGIEPQRTDYYPEEMSPPLMNSVSP
PQALLQENHPSVIVQPGKRPLPVESPD TQRKRRIHRCDYDGCNKVYTKSSHLKAHRRHTHTGEKPYKCTWEGCTWK
FARSDDELTRHFRKHTGIKPFQCPDCDRSFSRSDHLALHRKRHMLV

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FIGURE 1265

GGCACGAGGCCTTCGGCCACCCCGCTGACCATGGCAGTGTTTCATGACGAGGTGGAAATCGAGGACTTCCAATA
TGACGAGGACTCGGAGACGTATTTCTATCCCTGCCCATGTGGAGATAACTTCTCCATCACCAAGGAAGATTTGGA
GAATGGGGAAGACGTGGCAACGTGTCCTAGCTGCTCTCTCATTATAAAAGTGATTTATGACAAAGATCAGTTTGT
GTGTGGAGAAACAGTCCCAGCCCCTTCAGCCAACAAAGAATTAGTTAAATGCTTGAAGAAGCCTTCAGGAATCCAA
ATCCTGAACATTTGGAATGAGCCCAGATAGAAATATCGAATGCAAAGCTACTGGCTTCACAGAGACAACCATTTA
TGATTTGCTGTTCTGTAAGAGTGTGGATTCTTTCTATCAACTGCTGATATCATCTTCAGGAAGCAAGTCCATAAC
ATGACATATCTGGATTTTGTGCTTAGAACCTTAAATTGGAAGCATTCTTAATTATGCATCTAAATTTAAAAGAAG
ATAATTTCAAAACAGTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1266

MAVFHDEVEIEDFYDEDESEYFYPCPCGDNFSITKEDLENGEDVATCPSCSLIIKVIYDKDQFVCGETVPAPSA
NKELVKC

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FIGURE 1267

GGCACGAGGCCAGATACTACTGGCCATCAAGGGACAGAAGAAAAAGGCGCTCATTGTGGGGCACTGCATGCCTGG
CCCCGAATGACCCCCAGATTGACTCCAACAACGTGGTCCTCATTGAGGACAACGGGAACCCTGTGGGGACACG
AATTAAGACACCCATCCCCACCAGCCTGCGCAAGCGGGAAGGCGAGTATTCCAAGGTGCTGGCCATTGCTCAGAA
CTTTGTGTGAGTTGAGCCCAGGCCTCTGGTTGCAGGACTCGTGAATGGAGCAGTTCTGAGAACCACCCTTTTGCT
AAGGGAGCTTGGGAGCCACATGGCTGCTCCCTTCACACTGGGTAACAGTGTAGTATCCTGTGAGAGAATAAATGT
ATTCATTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1268

TCATGGCCGGCTCCTACCCTGAAGGTGCACCTGCAATCCTCGCCGATAAGAGGCAGCAGTTCGGAAGCCGGTTCC
TGAGCGATCCGGCGCGGGTCTTCCACCACAATGCTGTTGATTATGAGATCAATGCCCACAAATACTGGAATGAC
TTCTACAAAATCCACGAAAATGGGTTTTTCAAGGATAGACATTGGCTTTTTTACCGAATTCCTGAGCTGGCACCT
AGCCAAAATCAAAATCATTTGAAGGATTGGTTCCTTGGAGAACAAGAGTGAAGTATGTGAATGTAGAAACAATGAG
GATGGACCTGGTTTAATAATGGAAGAACAGCACAAAGTGTTCCTTCGAAGAGCCTTGAACATAAAACACAGACACCT
CCTGTGGAGGAGAATGTAACCTCAGAAAATTAGTGACCTGGAAATTTGTGCTGATGAGTTTCCTGGATCCTCAGCC
ACCTACCGAATACTGGAGGTTGGCTGTGGTGTGGGAAACACAGTCTTTCCAATTTTACAAACGAACAATGACCCA
GGACTCTTTGTTTATTGCTGTGATTTTTCTTCCACAGCTATAGAAGTGGTCCAGACAAATTCAGAATATGATCCT
TCTCGGTGTTTTGCCTTTGTTTACGACCTGTGTGATGAAGAGAAGAGTTACCCAGTGCCCAAGGGCAGTCTTGAT
ATTATCATTCTCATATTTGTTCTTTCAGCAATTGTTCCAGACAAGATGCAGAAGGCTATCAACAGGCTGAGCAGG
CTTCTGAAACCTGGGGGGATGGTACTTCTGCGAGATTACGGCCGCTATGACATGGCTCAGCTTCGGTTTAAAAAA
GGTCAGTGTCTATCTGGAATTTCTATGTGAGAGGTGATGGAACCAGAGTTTACTTCTTCACACAAGAGGAACTG
GACACGCTTTTTACCACTGCTGGACTGGAAAAAGTTCAGAACCTGGTGGACCGCCGACTGCAGGTGAACCGAGGG
AAGCAACTGACAATGTACCGGGTTTGGATTTCAGTGCAAATACTGCAAGCCCCTTCTGTCCAGCACCAGCTAAGAG
GCACCTGCTGCCAACACGATGCAAGCCCGTTGTGTTTCCGAGCTTTTTTTAAAAAAAATTTGTAGCACCAGGGCA
TGGTGCATGCCTGTAATCCAGCCACTCAGGAGGCTGAGGCAGGGAGGATCCATTGAGCCCAGGAGTCCAGCCTG
GGCAAAATAGCGAGAGACCCTGAATCTGAAAGTAATGATAAAATAAAAAGAATATAAATGAGGTCTCGTTGATGC
TGGACAATTCAAGAATTCAGACTTGAACCTTAAACCTAGGAAAAGTTACTTTGTATCAGGATTCTAACAATTATG
CTTCATATTTGTGAAGTCCTTTAAAAACATAATTTTCTCAAGTTCTTTCTTTGAGACCTCAATCTGTCTTAGCATT
TTGTAACTAATAACTGAAATTTTATTCAAAGGAATTGTAAACCTTAAACCACCAATTTATTTCCATGTGAAAAAG
TGTTATATATGACAAGTGTTTTTTGATTGTAATTGCGTTAAATCTTTTGAGAGTGTAATGCCGGGGCTAGGCAAT
TGCAGTTAATACATACAGGGGTTAGTGAAGGGCTTATTAAGTTGTAGGGGAAGCAAGCTGGGAAGAATCAGATCA
GATATTTTCCTGAC

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FIGURE 1269

MPVDYEINAHKYWNDFYKIHENGFFKDRHWLFTEFPELAPSQNQNHKDWFLLENKSEVCECRNNEDGPGLIMEEQ
HKCSSKSLEHKTQTPPVEENVTKISDLEICAEDEFPGSSATYRILEVGCGVGNTVFPILQTNNDPGLFVYCCDFS
STAIELVQTNSEYDPSRCFAFVHDLCDDEKSYVPKGSLDIIILIFVLSAIVPDKMQKAINRLSRLLKPGGMVLL
RDYGRYDMAQLRFKKGQCLSGNFYVRGDGTRVYFFTQEELDTLFTTAGLEKVQNLVDRRLQVNRGKQLTMYRVWI
QCKYCKPLLSSTS

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FIGURE 1270

GC GCGGACCTTTCAACAAGGGCTTTATTAATTCTCACGCTGCGGCCCTGGAAAGCGATGGAGGTGGCGGCTAATT
GCTCCCTACGGGTGAAGAGACCTCTGTTGGATCCCCGCTTCGAGGGTTACAAGCTCTCTCTTGAGCCGCTGCCTT
GTTACCAGCTGGAGCTTGACGCAGCTGTGGCAGAGGTAAACTTCGAGATGATCAATATACACTGGAACACATGC
ATGCTTTTGGAAATGTATAATTACCTGCACTGTGATTTCATGGTATCAAGACAGTGTCTACTATATTGATACCCTTG
GAAGAATTATGAATTTAACAGTAATGCTGGACACTGCCTTAGGAAAACCACGAGAGGTGTTTCGACTTCCTACAG
ATTTGACAGCATGTGACAACCGTCTTTGTGCATCTATCCATTTCTCATCTTCTACCTGGGTACCTTGTGAGATG
GAACTGGAAGATTGTATGTCATTGGAACAGGTGAACGTGGAAATAGCGCTTCTGAAAAATGGGAGATTATGTTTA
ATGAAGAACTGGGGATCCTTTTATTATAATTCACAGTATCTCACTGCTAAATGCTGAAGAACATTCTATAGCTA
CCCTACTTCTTCGAATAGAGAAAGAGGAATTGGATATGAAAGGAAGTGGTTTCTATGTTTCTCTGGAGTGGGTCA
CTATCAGTAAGAAAAATCAAGATAATAAAAAATATGAAATTATTAAGCGTGATATTCTCCGTGGAAAGTCAGTGC
CACATTATGCTGCTATTGAGCCTGATGGAAATGGTCTAATGATTGTATCCTACAAGTCTTTCACATTTGTTTCAGG
CTGGTCAAGATCTTGAAGAAAAATATGGATGAAGACATATCAGAGAAAAATCAAAGAACCTCTGTATTACTGGCAAC
AGACTGAAGATGATTTGACAGTAACCATAACGGCTTCCAGAAGACAGTACTAAGGAGGACATTCAAATACAGTTTT
TGCTGATCACATCAACATTGTACTGAAGGATCACCAGTTTTTTAGAAGGAAAACCTCTATTTCATCTATTGATCATG
AAAGCAGTACATGGATAATTAAGAGAGTAATAGCTTGGAGATTTCCCTTGATTAGAAGAATGAAGGACTGACCT
GGCCAGAGCTAGTAATTGGAGATAAACAAGGGGAACCTTATAAGAGATTTCAGCCCAGTGTGCTGCAATAGCTGAAC
GTTTGATGCATTTGACCTCTGAAGAAGTGAATCCAAATCCAGATAAAGAAAAACCACCTTGCAATGCTCAAGAGT
TAGAAGAATGTGATATTTTCTTTGAAGAGAGCTCCAGTTTATGCAGATTTGATGGCAATACATTAAAACTACTC
ATGTGGTGAATCTTGGAAGCAACCAGTACCTTTTCTCTGTCATAGTGGATCCTAAAGAAATGCCCTGCTTCTGTT
TGCGCCATGATGTTGATGCCCTACTCTGGCAACCACACTCCAGCAAACAAGATGATATGTGGGAGCACATCGCAA
CTTTCAATGCTTTAGGCTATGTCCAAGCATCAAAGAGAGACAAAAAATTTTTTGCTGTGCTCCAAATTACTCGT
ATGCAGCCCTTTGTGAGTGCCTTCGTCGAGTATTTCATCTATCGTCAGCCTGCTCCCATGTCCACTGTACTTTACA
ACAGAAAGGAAGGCAGGCAAGTAGGACAGGTTGCTAAGCAGCAAGTAGCAAGCCTAGAAACCAATGATCCTATTT
TAGGATTTAGGCAACAAATGAGAGATTATTTGTTCTTACTACCAAAAACCTCTTTTTAATAAAAGTAAATACAG
AGAATTAATTATTCTAACATATTGGCCTCTTTGTACTGGAAAAGTATTCAGTGGTACCTGGAGGTCTGGACAGTT
ATACTGTAACCTCTTAAGTTTTAATGTGCTAAATATATCTTGTATGATTTTTTTATTTTTTAATAACATTGGAAAT
ATATTCAAGAGATTATGATTCTGTAAAGCTGTGGAATGAAGCTGCAGATTTAGAGAACATTGGCTTCTGAAAAAA
AAAAAGAGTGAAGATAGTACTAGCAAGTATACTTATTTTTTAAACAGGCTAGAATCTCATGTTTTTATATGAAAG
ATGTACAATTCAGTGTTTAAAAATAAAAAATTTTATTGTGTAAAAA

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FIGURE 1271

ADLSTRALLIILTLRPWKAMEVAANCSLRVKRPLLDPRFEGYKLSLEPLPCYQLELDAAVA EVKLRDDQYTLEHMH
AFGMYNYLHCDSWYQDSVYYIDTLGRIMNLTVM LDTALGKPREVFRLEPTDLTACDNRLCASIHFSSSTWVTLSDG
TGRLYVIGTGERGNSASEKWEIMFNEELGDPFII IHSISLLNAEEHSIATLLLRIEKEELDMKSGSFYVSLEWVT
ISKKNQDNKKYEIIKRDILRGKSVPHYAAIEPDGNGLMIVSYKSFTFVQAGQDLEENMDEDISEKIKEPLYYWQQ
TEDDLTVTIRLPEDSTKEDIQIQFLPDHINIVLKD HQFLEGKLYSSIDHESSTWIIKESNSLEISLIKKNEGLTW
PELVIGDKQGELIRDSAQCAAIAERLMHLTSEELNPNPDKEKPPCNAQELEECDIFFEESSSLCRFDGNTLKTTH
VVNLGSNQYLF SVIVDPKEMPCFCLRHDVDALLWQPHSSKQDDMWEHIATFNALGYVQASKRDKKFFACAPNYSY
AALCECLRRVFIYRQPAPMSTVLYNRKEGRQVGQVAKQQVASLETNDPILGFQATNERLFLVLT TKNLFLIKVNTE
N

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FIGURE 1272A

GGGTGGCGGGGGGTTGCAAGTGGGAAGCCTGCTGTTTCAGCTGCCCGGGCTCTCCGCCTCCCCCACCCTGTATTG
AGGCTGGGTCTGGGGAACCTGTGCTCAGCATTCACCCCTGGAGCTTGGGCTTGGTCTTCCCTGCGGGTCCCTG
CGCTGACATTACAGGCGGGGAGCCAGGAGGCCTGGGCGCCTCCAGAGCCCGCGGGGGAGCCGGGCGAGGGTTCTG
GGCTCTGACGGCGGGGTGCGAGGGTGCCTCGCCGCCTCCTGGACACGTCTGTAGGCCTAGGGGAAGCCTGCCGGCCCGG
GAGGTACAGAGTAGGAGAAGCCAGATCCCAGGGCGGACAACGAGAAGTCGTCAGGCTAAGAAATGGCATTTCAAA
AGGCAGTGAAAGGGACGATTCTTGTGAGGAGGTGCTCTTGCAACTGTTTTAGGACTTTCTCAGTTTGCTCATT
ACAGAAGGAAACAAATGAACCTGGCCTATGTTAAAGCAGCAGACTGCATTTTCAGAACAGTTAACAGGGAGCCTC
CTTCCAGAGAAGCTCAGCTACTGACTTTGCAAAACACATCTGAATTTGATATCCTTGTATTGGAGGAGGAGCAA
CAGGAAGTGGCTGTGCGCTAGATGCTGTCACCAGAGGACTAAAAACAGCCCTTGTAGAAAAGAGATGATTTCTCAT
CAGGGACCAGCAGCAGAAGCACTAAATTGATCCATGGTGGTGTGAGATATCTGCAGAAGGCCATCATGAAGTTGG
ATATTGAGCAGTATAGGATGGTAAAAGAGCCCTTCATGAGCGTGCCAACCTGCTAGAAAATTGCTCCCCATTTAT
CAGCTCCATTGCCTATAATGCTTCCAGTTTACAAGTGGTGGCAGTTACCTTACTACTGGGTAGGAATCAAGCTGT
ATGATTTGGTTGCAGGAAGCAATTGCCTAAAAAGCAGTTATGTCCTCAGCAAATCAAGAGCCCTTGAACATTTCC
CAATGCTCCAGAAGGACAAACTGGTAGGAGCAATTGTCTACTATGACGGACAACATAACGATGCACGGATGAACC
TTGCCATTGCTCTGACTGCTGCCAGGTATGGGGCTGCCACAGCCAATTACATGGAGGTAGTGAGCTTGCTCAAGA
AGACAGACCCCCAGACAGGGAAAGTGCATGTGAGCGGCGCACGGTGCAAGGATGTCCTCACAGGGCAGGAATTTG
ACGTGAGAGCCAAATGTGTTATCAATGCCACGGGACCTTTACGGACTCTGTGCGCAAAATGGATGATAAAGACG
CAGCAGCTATCTGCCAGCCAAGTGTGCTGGTGTCCATATGTTGATGCCTGGTTATTACAGCCCAGAGAGCATGGGAC
TTCTTGACCCAGCGACCAAGTGTGCTGGTGTCCATATGTTGATGCCTGGTTATTACAGCCCAGAGAGCATGGGAC
CTGATACTCCAAGTGTGTTACACACCATCCATTCTTCAGAAGAAGATATCAACTTCATTTTGAATGAAGTGC
GTAATTACCTGAGTTGTGATGTTGAAGTGAGAAGAGGGGATGTCTGGCAGCATGGAGTGGAAATCCGTCCTCTTG
TTACAGACCCCCAAATCTGCAGATACTCAGTCTATCTCCGAAATCATGTTGTTGATATCAGTGAGAGTGGCCTTA
TTACTATAGCAGGTGGAAAGTGGACAACCTATCGGTCTATGGCAGAAGATACCATAAATGCTGCTGTCAAACTC
ATAATTTAAAGCAGGACCAAGTAGAACAGTTGGGCTTTTCCTTCAAGGGGTAAAGATTGGAGCCCCACACTCT
ACATTAGGCTTGTGACGATTATGGACTTGAAAGCGAGGTGGCACAGCATCTTGCCGCCACCTATGGTGATAAGG
CCTTTGAGGTGGCCAAAATGGCAAGTGTGACTGGCAAAAGGTGGCCTATTGTTGGAGTACGTCTTGTGTCAGAA
TTCCATATATTGAAGCAGAGGTGAAATATGGGATTAAGGAGTATGCCTGCACTGCTGTGGATATGATTTACGTC
GTACTCGCCTGGCCTTTCTAAATGTCCAGGCAGCAGAGGAAGCCCTACCCAGGATTGTTGAACTGATGGGCAGGG
AACTGAATTGGGATGATTATAAGAAGCAGGAACAACCTTGAAACAGCCAGGAAGTTTCTATATTATGAAATGGGCT
ATAAATCTCGATCAGAACAGTTAACAGATCGCTCTGAAATTAGCCTACTGCCTTCAGACATTGACAGGTATAAGA
AGAGATTTTATAAGTTTGATGCAGACCAGAAAGGCTTTATTACCATTGTTGATGTTTCAGCGTGTATTAGAGAGTA
TCAATGTCCAAATGGATGAAAATACACTCCATGAAATTTCTAAATGAAGTTGATTTGAATAAAAAATGGACAGGTTG
AACTCAATGAATTTTTCAGCTGATGAGTGCTATTCAAAAAGGAAGGGTATCTGGAAGCCGGCTTGCTATACTAA
TGAAACTGCAGAAGAGAACCTCGACAGAAGAGTTCCAATTCCAGTGGACCGTAGTTGTGGAGGATTGTCAGTCT
GGGCAGTAAATCCACAGCCAACAAACATAGAAAACGACAAATCACCATGTAACAACCAGAGATGACTGAAACCACT
CTGAAATAATGAATGTGGATAGCTGCCTTTTTTAACACTAGAAAACATTCCAAAACTTTAAGGTGTTGGTGTATT
TGCCAGCTTTATTTGCTGTACTTTATTTGTATTTGCCATTTCAGTCTAGCTTTTAAGTATATTTTTTTCTTTTTCT
CATTTTCAATGCACATTAGTTTTGTCATCTGTTTTGTGACCTGTTAGATGTGACACATTCTTTTTTGTATTATCC
CTTATTCTAAATGAGTTCTAAAAACATAATATTTTGGCAAAAATTGAAAAAGCTGGAGACATTTTGTGACATGC
ATACAGATAGCATGTGTTATTAATAAAGAGTTGCCTATTGAAATGATCGTGTCTTGGAGAAATTAAGCTTATAGA
CAGCATGTGTTATTAATAAAGAGTTACCTATTGAAATGATAGTGTCTTGGAGATTTCTCAGCCCCATCTTCTCC
AGCTTGTCTACCTTCCTCATGCAACAATATTCCACATTTTTATATCTAGAGCATGACTGGCTAACTGGAGAGGG
AAGGAAAAGTTTAGATCTGGTTACTGGAGCAAGTCTCAAAGAGAACTCTGAAAGCTTCCAGAATCACAGGTATA
AGATAAGGATAGCATTGACATTTGCTGGGAGTTACAGTGATAGTTTCATCTCAGCAGTTTCAATTTTTCTTCAGT
CACTGCTGGTTTTCTTTGACTATTATAGTTGCCAGGAAGATCCTTGCTCTTCTTACTTTAAACCAGCATTTAAG
TGGCAATTTGGATGTAATAGGATGAGACCAAATTTATCTAATTATTACAGTAGTAATACATTTAAGAGTTAAAA
TGTGTTTTTATATATCCACATATGATAACAAAAGATTCAATTCCCAAGCCTAAATTTTGAAGCATGTGGTATTGT
CAAATCTAGCTTACCATCTTTTTTGGGGGTACTTGCAACCATAGTAAAGGAAGATGGAATAGACTTTAGTTAACT

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FIGURE 1272B

TTAATTATAATTATATGTTAAATAAGGCACATAACCAGTTTCCAAGGTCATCATGGTTGCTTAAAGTCTTTCCCC
TTCTGTACTCCATGGAAATATTCTCAGTAAACCAAAAACAAAATGGAAAAATAATCACCAACCCCATCCCGAC
ACACACACACAGTCCAAAGCAAAGTCAGTGTGTATTGAATTTAACAAGTAATGCAGTTTGGGATGCTTTTGCTA
CATTTTGGTGGCATTTTAACTAGTTATCTGAATATTTATTAATCGTACTTCCTCTTGTAAGTTAACTACTTACT
TTTTTGTGTGTGTGTGTGTAAACATCAGGTTCTGTATCTAATAGGAGATGTAACACTTTATTTTCATGGCAGGTTTT
TATTGCAGAGACTTGAAGTCTTAGTTTTTTAACTGGCACATAAAACACTTTTTGCTGTATTATTTTATTTATGTC
AATACTGCAGAGTATCTTTATGCCTTATTCAAGTGGATTCTGAGCCTGTATGTCACAATGTAAACACTGGAGGTT
CACTCACCTACGCACTCACCCACCACCTCTGAAAGAAACAGAACTGCAGAGAAAGACAGCATCTTAGCTCATT
TGTTTTTAAATGAGGTTTTAGACGCTTGCCACTTCCTAAGGGAAATCCTAAAACAGAGCAAGTGATGCTCCCAGG
TATCACTGTGAACTTTTTTCTTTCAAAGTGTGAATTTTACACTGGCTTTTTTCATTTTTTTAAAGTAATTGAAGC
TTGTGGCTTTACAACCTTAGTGTTTTTGTCTATCCAGATAACAAGTTTCATTGTTTAGAACCCAGTGACACTTAAT
AGGTAGATAAAATTGTCCTTTAAATATCCAGATGATATACACAATATGGTACATTGTGCTCTCTCTCTCTGTT
TTTCTCTCTTTCTCTTTCTAGTTAGATCAAGATAACGATGACTTGTACCCTCCCTGATTCTGTTACAGTAGGGCC
CGGGCAGATCTGTGTTTGTAAACAGGCCTTGTTTTGTGCATGCTTTGCTATGAATGAAGTTCCTTTAAGGACAAA
GAAAAGCACACTTTTCTTCTTTTGAGCATATCTGCTTTTACTTTAAATCTGCTAATTTCTAAATGTAGAGTCTT
TCACCAATCCAGAGACTCAATTTGGAAATGAAGTGAATTTCAAGCCGTTACTGTCAATAAAGCACCCACAGCATT
TGTATAAGCTCTTAATTAACCTGTACAGCTTCTTTACCTGATTTAAGAAAGGGAGACAAGCAATAGGGGGGAAT
AAGCTTCTTCAAAATTCATTCCAAGCACAAAAGAAATTTTTTCCCTTTGCATATAAACTTGACATCAGTTGATTC
TGTTGGGGTCGGGGTGGGTATGCAGGGATTGCCTTTTATTATCAAGTGATTTATTTCAAGAGCCTTTGAGGGGAT
TCAGGTGAAGGAACCCCATCTGTGCTGGAGAGTTGGATACTCCTTTAAATAGCCCCACCACAGTCATAACAAT
AATGATAATGCTGGATTATTTGTTAAGCCAAGGTTGTCTGCCTCATATCCATCATGCTGTTTGCAATATTCTTGC
TTCAATCAATTTATACTGAGTGTAACCTTAGGATTCTGCTATTAAATGCATGCTCTCTATCCTGCTTCAGTTT
CTGGCTTTGCTTTGTCTGTTTCAAATATGTAGCTTCCTCTTTTGTACAACAAAAACTCATTCTCACTTTTACT
AAATATACTGTAGGAGTCATCATTGATGTTATTTTTCTCTTATGTATCTGTAAAGATTTTTGGCATATGAATGTA
ATATTAAAGTCAATGATGCTATAACTTGCGATGTTTGCATCATGTCAACCTTTTTGAAGGAGTGAAAAAGCCCTA
CTATGTTTTTAAATAGCAAGTGTAAGCTCAGTGCTAGAGTGGATATACACACCGCATGTTTTCATATGTGGCACT
TTTATGTATCATGTTGGGTTATTGTTCTAGACTGGACTGTTAAATACTATGTTTGAGGCTGGGTTGTCATTTTTA
TAACTGTCTTGGTGTGTTTTATGGCCATTATTTATTACTTTTGATACACAGAATGAGCTGCATGCATTTATAGAGCA
ATAAGAGGATGTATTTAATGTGCCTTGTTTTTAACTGAATAAGAAGTGAAGCATGAATCAATAAACTGATTAA
AATGGTCTATTTGCTAGCATTTTGATGTTACTTGCAGTCAGATAACTTTGATTACTGTTGAAGTTTAAAAAAGT
TTGAAAATATTTTTACAACTGTGTTTTTGATGACACAAAAGTGAAATATCTACAGAGATAGATGTAATTTTATA
AGACTGCCAGAATTATTTGTATTAATTTGTTGCTGTAGCCTTTAGGGCATGACTTCTGTATTTGTGCAATCCTAT
TCTACAATTACATTCATCCTATTACAACCTCAAAGAAAAACAAAAAGTCGACGCGG

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FIGURE 1273

MAFQKAVKGTILVGGGALATVLGLSQFAHYRRKQMNLAYVKAADCISEPVNREPPSREAQLLTQNTSEFDILVI
GGGATGSGCALDAVTRGLKTALVERDDFSSGTSSRSTKLIHGGVRYLQKAIMKLDIEQYRMVKEALHERANLLEI
APHL SAPLPIMLPVYKWWQLPYYWVGKLYDLVAGSNCLKSSYVLSKSRALHFPMLOKDKLVGAIVYYDGQHND
ARMNLAIALTAARYGAATANYMEVVSLKKTDPQTGKVHVSGARCKDVL TGQEFDVRAKCVINATGPF TDSVRKM
DDKDAAAICQPSAGVHIVMPGYSPESMGLLDPATSDGRVIFFLPWQMTIAGTTDTP TDVTHHP IPSEEDINFI
LNEVRNYLSCDVEVRRGDVLAWSGIRPLVTDPKSADTQSSIRNHVVDISEGLIT IAGGKWTTYRSM AEDTINA
AVKTHNLKAGPSRTVGLFLQGGKDWSTLYIRLVQDYGLESEVAQH LAATYGDKA FEYAKMASVTGKRWP IVGVR
LVSEFPYIEAEVKYGIKEYACTAVDMISRRLAFLNVQAAEEALPRIVELMGRELNWDDYKKQE QLETARKFLY
YEMGYKSRSEQLTDRSEISLLPSDIDRYKKRFHKFDADQKGFITIVDVQRVLESINVQMDENTLHEILNEVDLNK
NGQVELNEFLQLMSAIQKGRVSGSRLAILMKTAENLDRRVP IPVDRSCGGL

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FIGURE 1274

TTTTTTTTATCATTGACAATGTTTATTATCAAGAACTTTAGGTTTTTTAAAAGAATGCTCGTTTTAGAAATACAC
CAAGAGGACACTCTGTGACAGGACATATACAAACAAGGATAATTAAAATATTAAATACTATCTAAATTAAAAGAC
CATAATTCAAATTGCTAATTATAATATTTGTGTCGGTAGAAATAACTATAGTTCCCCCTTCATGAAATTCACCCCC
ACGTTCTCATGAAGACTATGACGTCTCACCACAATTTTCAGTTATTTAATTTACAATAATCAATGCTGAGTTTTCT
GTGCTGAAGCATGCACTGTTACAGAAAGCACAAAATCCTATTTACAGGGATTTTGTAGTTTTCTTTAAAATGTATC
TCAAGCATCTTTTAAAGTGGAGCTACAAATAGGTTGTATCCTTAATGAAAAAGGCTTCTTTCTAAAAGAAGTAT
GAGATAGCTATCCAATACTGCAGGAACAGTTATATAACTAACCGAAGGAACCAGCAGCACTCTGCTAACTCTGTT
TTAGTGTAGCAACCTCCTTCTTGGTGTTCTACTACCAGCCAXACATGTACTCCATTGCTTTGGATACCAGACTTT
CATCTTTTTTTGGCGTTTGICTGTCAGAAATACCCTGATAATCACTAGTAGAGGC

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FIGURE 1275A

[illegible]

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FIGURE 1275B

CACATATAAGCCATAGTTACAGTACAGGTGGCAGTATTTAGAGCACTCAGATTTTCAGTTCTGTTAAATGTGAAAAG
AGGGATCGACTGACGTTTCATTGCTGTTCCATAACTAGTGTAATAATGTATATGTTTATCTTTATTTTTATAATA
TGCAAATACATTTAAATTTATACAGTTTGAAAGCTTCTAGCGTTAGTTCACACTGGGTGCAATATTCTGCATGAGA
ACTGTGCCAAGATGGGGCTGATTTCTTATTTTAGTATAAGACTTTTTTGTTTTTTCTTTATTTCTTTAATCCTCTT
CACATTAATAAAAAAAAAAATCTCTCTGTTAGCCCATGGATTAAGTGTTGGTTCATAGAGATTGCCAATAATCAGAA
AGAACCTTAAATGTGCATTTAAGACAGTGTCCTTCCCTTCTTTTCAATGAAGGTCCCTGCCTATATAAATCATC
TGGCACGCTGGTGGGAAATCCTTTGCTCTTCCAACGTGTTATTAGTGCTGGGCAGAGATGGGGCACACTCAGGGG
CCAAAGAGGACAAAAAGTCCATGCAAACTTGAGTCTTTTAATGGCTTAAGATAATCAGGAGTCAGTTCTGAATC
TTACAAAGTGCTCTGCTTAATAAGTACCTTACTTAGCAGAGCACTTTGCAAACATATTACTTATTAGCAGAGCTC
TTTGTAGACCTTCCACATCTGGCTGTCAGATCTTAAGGTTGTGAATTTAGGCTCCAGTTACATTTACTGGAGAGC
ATAATCCACACGGGTTATTTATAAATACAGAGCCTCTGATTGGACGGTCTCCTGCCAAGAAGTAGTAATACCTT
TGTTTTAAATCTTACAAAGGTAAACTTAAAAAGCCAAACCAAAATGCTCTCCATTCTACTTTTAATTGGG
CCAAACAGCATATGCTACAGTAGTAACATGTTTTTCGGAGAGTGTAATAAACTCTGTTTACATTTGCCTCCTCCG
TGGGTTGATCGAAAATGTATAAACTGACTGCTTCTCGCCAGCCTCAGACAAGAAGAGTGAGTTGCTGGTACTCG
CTACTCTTTTACTTCTTTTGTAAAGTATTGACTCTTGGAAGGCTACAGTATACAAAGTCTCAACATGTTTTTTAA
AAGAAATAAGGAGCAAGCGACTGCCCTGCTAGAAATCACAAACCGATTTTTGTAGAATATTTTGTGCCCCAGGCA
TTAATTTCACTGACTCCAGAACCTGCAGTTCAGAGAATGATTTCTTATGATGATAAAAATCGAATGGGATCAGAC
GATGTTTGCATTTTTTTAATACTTGAATAGGACACCTCAAGTTTGAGATTTTCAATTTCTTTTAGAACACAGTCAC
AAGATTAATCTGGTGAATCCTTTTGTACAGTTCTCGTGTGTGTGTGCGCGTCTCCNNNNNNNNNNNNNNNNNN
NNNNNAAAACTGAATGGTCACATTTAATTGCTTTTTTGGACCATTGAATAGTTGGGAAGTAAGAATTTTTTAATTG
GCATGAGACGGTTCCTCAACTGTTAAATTAACCAACTTTGACCTGTCTTTAGAAAAAGGCTTATTTGTATGATTT
TGGGCTAACTCCCCGGGGACCATATTAAATGACAAAAATGCTCCTTTGGGTGACACACCCCTACAAAGTATTTGCT
GTTACGAACATAAACGCCACATTCTTAATATCTAATATTTTTGACCAGTGATGTTTTATGCTGTCATCTGAACC
CTAGAGAAGCAGTGTCAGAGGAAACCTTGGTGTACATGTGTCTTAGCAAAAGGGTTACCATGATCGAGGGTCAT
GTGACCAAAAGATGCTCCAGAGAAGCTTGAGAATTTGTTTCAAGTTGGGAGGAGGGTTGGAGATACAAAAATCAC
TCTGCTCTACAGGACTCTTCAGCTGTCTATGCAAGAAATTCGGTTTTCTCTTTTACGACCTGGAAAGACACAGCA
GCCACCGAGGCGATAGGTGATTCACCTAAGCACAGAGGAATGTTTTCTAAGCAAGGCGTCCCTTGCCCTCTCAA
CAAATGCCCTCCAAGTTTGTTAGGGTTTCTATTCTGCACTTGATGATCAAAACCACTTCTTGGAAATTGTCAA
AGCACTGCCAAAATAAATGTTTTTCCCCCTTCTAAGAAAAAAAATGACAGTGCTCATATTTGACACTTGTGTA
TTGGACTCTCTTTTGAATGAATAAAAAGGAAAAGGGGTTTGGTGAATTCCTGATGGGGTGCGTGTTGTTTTCA
TGCCATGGTTTGTGAATTTAATTGTGGTTTCCCATTTCTGTTGTGTAAGTGGGCAGAAATTAATAAAGAAAAAT
CAATAAAAAATACAAAGAAATGGTTAAAAA

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FIGURE 1276

AAGRRAREGRQGQEPGPGRGAACSCGLPRRVRLSARGPAMAGMDSGNLKTARLWRDAALRARKLRSNLRQLTLT
AAGACPGAGADALESPASPQLVLPANLGDIEALNLGNNGLEEVPEGLGSALGSLRVLVLRNRNFARLPPAVAELG
HHLTELDVSHNRLTALGAEEVVSALRELRLKLNLSHNQLPALPAQLGALAHLEELDVSFNRLAHLPDLSCLSLRLT
LDVDHNQLTAFPRQLLQLVALEELDVSNNRLRGLPEDISALRALKILWLSGAELGTLFAGFCELASLESMLDNN
GLQALPAQFSCQLRLKMLNLSSNLFEEFPAALLPLAGLEELYLSSQPAHLGAIRLSRAWAGFLTTLWLDNNRIRYL
PDSIVELTGLEELVLQGNQIAVLDPHFQGLSRVGLWKIKDNPLIQPPYEVCMPGIPYIAAYQKELAHSQPAVQPR
LKLLLMGHKAAGKTLLRHCLTEERVEGCPGGGDKKCYPPSPPPVSKGIEVTSWTADASRGLRFIVYDLAGDESY
EVIQPFFLSPGALYVLVVNLATYEPRHFPTTVGSFLHRVGARVPHAVVCIVGTHADLCGEREELEEKCLDIHRQIA
LQEKHDAEGLSRLAKVVDEALARDFELRSASPHAAYYGVSDKNLRRRKAHFQYLLNHLRLQILSPVLPVSCRDPRH
LRRRLDKLLSVAEHREIFPNLHRVLPERSWQVLEELHFQPPQAQRLWLSWWD SARLGLQAGLTEDRLQSALSYLHE
SGKLLYFEDSPALKEHVFNHLTRLIDILNVFFQORDPSLLLHKLLLGTSGEGKAEGESSPPMARSTPSQELLRATQ
LHQYVEGFLHGLLPAHVIRLLLKPHVQAQQLLLELLEKMGCLCYCLNPKGKPLNGSTAWYKFCYVQNEVP
HAEAWINGTNLAGQSFVAEQLOIEYSFPFTFPPGLFARYSVQINSHVVHRSDGKFQIFAYRGKVPVVVSYPARG
VLQPDTLSTIASHASLPNIWTAWQAITPLVEELNVLLQEWPGHLYTVHILCSKCLKRGSPNPHAFPGELLSQPRPE
GVAEIIICPKNGSERVNVALVYPPTPTVISPCSKKNVGEKHRNQ

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FIGURE 1277

GCAGCCCCGGCGGCCGAACGCCCGGGCGGGGACTCCATCGTCAGAGAAGTCATTGAGAATTCAAAAGAAGTTC
TAAGTTTATTGCAAGAAAAAACCTGCCTTCAAGCCGTTCTTGCAATTATCCAGGCAGGTGACGACAACCTGA
TGCAGGAAATCAACCAGAATTTGGCTGAGGAGGCTGGTCTGAACATCACTCACATTTGCCTCCCTCCAGATAGCA
GTGAAGCCGAGATTATAGATGAAATCTTAAAGATCAATGAAGATACCAGAGTACATGGCCTTGCCCTTCAGATCT
CTGAGAACCTTGTTTAGCAACAAAGTCCTCAATGCCTTGAAACCAGAAAAAGATGTGGATGGAGTAACAGACATAA
ACCTGGGGAAGCTGGTGCAGGGGATGCCCCATGAATGTTTTGTTTACCTGTTGCCAAAGCTGTAATTGAACTTC
TTGAAAAATCAGGTGTCAACCTAGATGGAAAGAAGATTTTGGTAGTGGGGGCCCATGGGTCTTTGGAAGCTGCTC
TACAATGCCTGTTCCAGAGAAAAGGGTCCATGACAATGAGCATCCAGTGGAAAACACGCCAGCTTCAAAGCAAGC
TTCACGAGGCTGACATTGTGGTCCTAGGCTCACCTAAGCCAGAAGAGATTCCCTTACTTGGATACAACCAGGAA
CTACTGTTCTCAACTGCTCCCATGACTTCCTGTGAGGGAAGGTTGGGTGTGGCTCTCCAAGAATACATTTTGGTG
GACTCATTGAGGAAGATGATGTGATTCTCCTTGCTGCAGCTCTGCGAATTGAGAATGAGTGGTCAAGGAGGA
GATGGCTTCGTGAACAGCAGCACAGGCGGTGGAGACTTCACTGCTTGAACTTCAGCCTCTCTCCCTGTGCCAA
GTGACATTGAGATTTCAAGAGGACAAACTCCAAAAGCTGTGGATGTCCTTGCCAAGGAGATTGGATTGCTTGCA
ATGAAATTGAAATCTATGGCAAAAGCAAAGCCAAAGTACGTTTGTCCGTGCTAGAAAGGTTAAAGGATCAAGCAG
ATGGAAAATACGTCCTTAGTTGCTGGGATCACACCCACCCCTCTTGAGAGAAGGGAAGAGCACAGTCACCATCGGGC
TTGTGACAGGCTCTGACCGCACACCTGAATGTCAACTCCTTTGCCTGCTTGAGGCAGCCTTCCCAAGGACCGACGT
TTGGAGTGAAAGGAGGAGCCGCGGGTGGTGGATATGCCAGGTCATCCCATGGAGGAGTTCAACCTTCACTTGA
CTGGAGACATCCACGCCATCACCGCTGCCAATAACTTGCTGGCTGCCGCCATCGACACGAGGATTCTTCATGAAA
ACACGCAAACAGATAAGGCTCTGTATAATCGGCTGGTTTCCTTTAGTGAATGGTGTGAGAGAATTTTCAGAAATC
AGCTTGCTCGGCTAAAAAACTGGGAATAAATAAGACTGATCCGAGCACACTGACAGAAGAGGAAGTGAGTAAAT
TTGCCCCGTCTCGACATCGACCCATCTACCATCACGTGGCAGAGAGTATTGGATACAAATGACCGATTTCTACGAA
AAATAACCATCGGGCAGGGAAACACAGAGAAGGGCCATTACCGGCAGGCGCAGTTTGACATCGCAGTGGCCAGCG
AGATCATGGCGGTGCTGGCCCTGACGGACAGCCTCGCAGACATGAAGGCACGGCTGGGAAGGATGGTGGTGGCCA
GTGACAAAAGCGGGCAGCCTGTGACAGCAGATGATTGGGGGTGACAGGTGCTTTGACAGTTTGTATGAAAGATG
CAATAAAACCAAACCTGATGCAGACCCTGGAAGGGACACCTGTGTTCTGTCATGCGGGCCCTTTTGCTAACATTG
CTCACGGCAACTCTTCAGTGTTGGCTGATAAAATTGCCCTGAACTGGTTGGTGAAGAAGGATTTGTAGTGACCG
AAGCTGGCTTTGGTGCTGACATCGGAATGGAGAAATCTTCAACATCAAGTGCCGAGCTTCCGGCTTGGTGCCCA
ACGTGGTTGTGTTAGTGGCAACGGTGCGAGCTCTGAAGATGCATGGAGGCGGGCCAAGTGTAACGGCTGGTGTTC
CTCTTAAGAAAGAATATACAGAGGAGAACATCCAGCTGGTGGCAGACGGCTGCTGTAACCTCCAGAAGCAAATTC
AGATCACTCAGCTCTTTGGGGTTCCCGTTGTGGTGGCTCTGAATGCTTCAAGACCGACACCCGCGCTGAGATTG
ACTTGGTGTGTGAGCTTGCAAAGCGGGCTGGTGCCTTTGATGCAGTCCCTGCTATCACTGGTCCGTTGGTGGAA
AAGGATCGGTGGACTTGGCTCGGGCTGTGAGAGAGGCTGCGAGTAAAAGAAGCCGATTCCAGTTCCTGTATGATG
TTCAGGTTCCAATTGTGGACAAGATAAGGACCATGCTCAGGCTGCTATGGAGCCAAAGATATTGAACTCTCTC
CTGAGGCACAAGCCAAAATAGATCGTTACACTCAACAGGGTTTTGGAAATTTGCCCATCTGCATGGCAAAGACCC
ACCTTTCTCTATCTCACCAACCTGACAAAAAAGGTGTGCCAAGGGACTTCATCTTACCTATCAGTGACGTCCGGG
CCAGCATAGGCGCTGGGTTCAATTTACCCTTTGGTCGGAACGATGAGCACCATGCCAGGACTGCCCACCCGGCCCT
GCTTTTATGACATAGATCTTGATACCGAAACAGAACAAAGTTAAAGGCTTGTTCTAAGTGGACAAGGCTCTCACAG
GACCCGATGCAGACTCCTGAAACAGACTACTCTTTGCCTTTTTGCTGCAGTTGGAGAAGAACTGAATTTGAAAA
ATGCTCTGTTATGCAATGCTGGAGACGTGGTGAATAAGGCCAAAGATTTCTTCTCGTTCAAGATGAATTTCTGTTC
ACAGTGGAGTATGGTGTTCGGCAAAGGACCTCCACCAAGACTGAAAGAACTAATTTATTTCTGTTTCTGTGGA
GTTTCCATTATTTCTACTGCTTACACTTTAGAATGTTTATTTATGGGGACTAAGGGATTAGGAGTGTGAACTAA
AAGGTAACATTTTCCACTCTCAAGTTTTCTACTTTGTCTTTGAACTGAAAATAACATGGATCTAGAAAACCAA
AAAAAAAAAAAAA

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FIGURE 1278A

CGGGGCCGCTGAATGAGATCCTCATCTGCGGGAAGTGTGGCCTGGGTACCACCAGCAGTGCCACATCCCCATAG
CGGGCAGTGCTGACCAGCCCCTGCTCACACCTTGGTTCTGCCGACGCTGCATCTTCGCACTGGCTGTGCGGAAAG
GCGGCGCGCTGAAGAAGGGCGCCATCGCCAGGACGCTGCAGGCCGTGAAGATGGTGCTGTCTACCAGCCCGAGG
AGCTCGAGTGGGACTCGCCCCATCGCACCAACCAGCAGCAATGCTACTGCTACTGCGGCGGGCCCGGAGAATGGT
ACCTGCGGATGCTGCAATGTTACCGGTGCAGGCAGTGGTTCCACGAGGCCTGCACCCAGTGCCTCAATGAGCCCCA
TGATGTTTGGAGACCGGTTTTACCTGTTCTTCTGCTCCGTGTGTAACCAGGGCCAGAGTACATCGAGAGGCTGC
CCCTGCGATGGGTGGATGTGGTTACCTGGCCCTCTATAATCTGGGGGTACAGAGCAAGAAGAAGTACTTTGACT
TTGAGGAGATTCTGGCCTTTGTCAACCACCACTGGGAGCTCCTGCAGCTTGGCAAGCTCACCAGCACCCCACTGA
CAGATCGAGGACCACATCTCCTCAACGCTCTGAACAGTTATAAAAGCCGGTTCCTCTGCGGCAAGGAGATCAAGA
AGAAGAAGTGCATCTTCCGCTGCGCATCCGCGTCCCACCCAACCCGCCAGGGAAGCTGCTGCCTGACAAAGGAC
TGCTGCCAAATGAGAACAGCGCCTCCTCTGAGCTGCGTAAGAGAGGAAAGAGCAAGCCTGGTTTTGTTGCCCTCACG
AATTCCAGCAGCAGAAAAGGCGAGTTTATAGAAGAAAAAGATCAAAGTTTTTGTGGAAGATGCTATTCCAGTA
GTGACTTCACCTCAGCCTGGAGCACCAACCACCACTGGCTAGCATATTTGACTTCACGCTGGATGAAATTCAA
GTTTAAAAAGTGCCAGCTCAGGCCAGACCTTCTTCTCAGATGTGACTCCACCGACGCTGCCAGCACCTCTGGCT
CTGCCCTCCACAGCCTCTCCTATGACTCCAGATGGACAGTGGGCAGCCGAAAGAGGAAGCTGGCAGCCAAGGCAT
ACATGCCCTGCGGGCAAAGCGGTGGGCAGCTGAGCTGGATGGACGCTGCCCTCGGACAGCAGTGCAGAGGGGG
CTTCAGTCCCCGAGCGGCCAGACGAAGGCATTGACAGCCACACATTTGAGAGCATCAGTGAAGATGACTCATCCC
TGTCCACCTCAAGTCATCTATCACCAACTACTTTGGTGCAGCTGGGCGGTTGGCCTGTGGGGAGAAGTACCAGG
TGTTGGCTCGGAGGGTCACACCTGAGGGCAAGGTTCACTACCTGGTGGAGTGGGAAGGGACCACCCCTTACTGAC
TAGCCCCCGGGGTGCCAGGGGTCTGAAAACCAAAGGAGGAGCAGCAGAAGCCATAGGCTCCCCAGCTTTCTCC
AGGCTGGGGTGGGAGAAGGAAGCAGGACAGAGCTGCAAGTGCTGGCAGAATGCCCTGCCTGCCTGCCTGCCTGC
CAGGCCAAGGCCTGCGTCTCTCTGCTGTACCAGCTCTGTTCCAGGGCCTCCTCAGGCTCGTTACCCCTGTGCCTG
TGTCTCTACACACTCCACACCCCTCAAACCTCTGTTTATCTGTTCTCTGACCTTGTGTCCCTGCGCTGGGACCC
TTCCTCTGAGGCCAGGTCTTTGTCCCCAGTTGTGTGCCTTGACCTCTCTCGCCCTTTCTGGGTGTGTTCCGA
CATCCTGTGTGTGCACAGCTGTCCCTCCACTGGATCCCTTCACACGTGACCCGTGGGGCAGCCAGTCCCTCCAG
GGACTACATAACAGGCACCTTTGAGAGAGCATGGGAGAAGGTGGATAAGAGGATGCTGCTCAGTGCTTTTCTCTT
CCACTTTCCTGCCACTCCCCACTACCTCGGAGAGAGGTGGTGGGATGGGAGAGAGCCCTGTGAAAGCCTGTGA
GGATCTGAAGAGTAAAGGGCTGGGTCTGCCTCAGAAAGGCACCAGCACCAGGGCCAGGTATTAAGGCTGAGAGTG
AAGGCTGCCAATGTGAGCTTTGGAGGTCCAGAAAGTCTTCTGTTCTCTGGCCTCACCCCTCAGTCGCCATAGAG
CTGGGCCTGGCCTTGCTGGAATGGAGGCATCCTTCCAAACCTGGGGGACGGGGGTGGGGGGTGGTAGTGGTGGGA
GGGAAACCATGTCTTGCTAAACCTGTTTCTGGTGCTCCCATCCCCAGACCCACCAGACACCACACAGCAGACAA
TACACACCCACTCGCACAAAGCTTCCATCCACATGTGTTGTACTTTAGCTCTAGGCATGCAGACAACCCACACAG
GCCACACCACCATGCCAAAGTGACACACACAGAGCCACACCGTCCCTCTGGGCCTGCTGGCTCCTCCCTTGG
CTTTCCTTGGCCACTTCCAGGGCCCAGGTGCTGCAACTAAATGTGAAAGCTCAGTGGCCGCTCCTTCTTTCAG
CCCATCAACCAGCATTGGTCCCATAGGGAAGCACAGGGGACTCACCTCTTTTCATATCCCTTGGCCCTGCCCTGAA
ATGGACAATCACTTTTTTGGGATAGGTTGAAATTTTTTAAAGAGCCTGCATCATTCGGTTCCTCAAAGGGAAGCCC
TTGCTAGTGGGGGTTTGAAAGAGAATTTTTTGAACCAACATTCAAATTCTGCCTCATCTGGAGGGAAACCAAAAT
TGGGAGGGGGAAGAGGACCCCTGATGTTTTGCTGCTTCCAGAGATATTAGAACTGACTCACTTGATTGGAATAAT
GGACAAAAGTGCCTTGACGTGGAGGGTGGGCACCAGATGGGGACCAGCCTTGCCAACTGCTGCTGTGGCCTCCAG
CTTGGCTGGTTTTTGACAGGCCGCCAGCAGGAAGGCGAAGGTGGTAGTACAGCAAGAGGCACTGGCGGGGCAGCAGG
CCTGCAGGAGCTGTTTTTCCATTGCTAGGCCTGACCCCTCTCTACCTGTGAGCGTTAGGGGGTCCCTGAGATAG
TTTAGATGCCCCCCCCATCTTAGACCTCAGCTCCCACAGTGCCTTTTAAGGGGGACCTCACCTCCTGTGCACAGC
CCACCCACTTTCCTCTGCTTCCCTGGCACAGCCAGGCATAGACGAGCTGGCGTTGGACCCAGTTCTTCCCCCTT
TTCAGCCCCACAGCTGCTGCCACAGGGGCCAACTAGGGCCAGGTGGAAGGGGAGCTGAGAAGCCAACCCCTAGCC
CAGGGGTGCTGTGGGAACTGGGATCCAATTTGTAGCTTCCCGCCTGGCTTCAGAGAGCCAGCAACCTTCTAGGC
CTGCTTTCAGACTTCTGAGATAGCCTGGGATGAGCAATCCTGTTACAGTACATCTGGACCTTCCCTACCTGGGC
TCTGGGGAGGCTGTGGGCCTGGAGAGGGAAAAGGAGGGAGGGGGTGTCTGCACCACCTGGGAAGATAGCACAAGG
CCTAATGAGGTCACCCTGACTCCCCACCCAGCATTTTCATTACATACCAGATAATAGCTGCATTACTGCCAACTGA

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FIGURE 1278B

CCTTATAACCCTCTGCACCTTCAAAAAGATTCATGGTTTTTAATTGCTGCTTTTAATAACATTTGTAAAGTTAAA
AAAAAAA

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FIGURE 1279

GPLNEILICGKCGLYHQCHPIAGSADQPLLTPWFCRRCIFALAVRKGGALKKGAIARTLQAVKMVLSYQPEE
LEWDSPHRTNQQQCICYCGGPGEWYLRMLQCYRCRQWFHEACTQCLNEPMMFGDRFYLLFFCSVCNQGPEYIERLP
LRWVDVVHLALYNLGVQSKKKYFDFEEILAFVNHHEWELLQLGKLTSTPVTDRGPHLLNALNSYKSRFLCGKEIKK
KKCIFRLRIRVPPNPPGKLLPDKGLLPNENSASSELRKRKSKPGLLPHEFQQKRRVYRRKRSKFLEDAIPSS
DFTSAWSTNHHLASIFDFTLDEIQSLKSASSGQTFFSDVDSTDAASTSGSASTSLSYDSRWTVGSRKRKLAAY
MPLRAKRWAAELDGRCPDSSAEGASVPERPDEGIDSHTFESISSEDDSSLHLKSSITNYFGAAGRLACGEKYQV
LARRVTPEGKVQYLVEWEGTTPY

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FIGURE 1280

CTGTTTATAGATAATGTCTGCAGTTTCTGTTTGAGAGAGATAATTATGACACTTAGCATTGGAAAAC TAAGAAGA
ACGTAAGCAGGTCAGCTATCAGAAGTCTTCAGACTGGAGAGATTCTTGAGGGGGAGTGGCCCTTTAATCCATCA
GCTGAAGCCATCTGGTAGGACGCTCGTTGCAGAAATGGTTAGTTCTGAAATGTTGTAGCTCAGCAACATCACTGA
ATGTCACAGAATTGACAGGCACGGAGCTAAAAGGGCCTCTAGCCACCCCCACAAC TCCGCTCTACCTCTGTCTCC
CTAACACATGACTTGGAACAAATACACTCTAGGTACAAAGATGGCTACCTGAAGTTTATGATCCCTACTCATGGA
GCTGCTTGAGGACTTCACATTTTTTAAAAGCTGCTTTGGGCACCCCCATTCTGAGGAGTTTTGTAGCTTG GTT
TCTCTTTGCCACATTACGTTTGTAAGACTAACATTTTATAACCATAAGCAGTTAGGCCTTTTTATTTTGAGAAAT
TTATCTGTAGCTTCCTTTTTATTTACACTTG GGGACTATTTTAAAGTAACCGATTGAAATATTTTTGTTTCTCCAT
TGCAAGTGAAATCCTTGTTGCTAATCTTTTGCCACATGTAAATTTGTTCACTTGTTATCAAGCAGGTAGTTCAAT
ATCTGTAATCTTGAGTTCTTTTCAACTAGCATGATGCTAGGTGTCACTCACTGTTTTTTAATTGTGGGAGATTG
ATGCGTCAGTGCATGAAGTGGGGGTGGTCACCAGCATCTAACTCAAAGTGTGATTATAGCTATCTTACCACATT
TTTTTTTTCTTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGTGTAACTCTCAGCTCACTGCAGCCTCGACCTC
CTGGGCTCAAGCGATCCTCCTACCTCAGCCTCCCAAATAGCTGGGACCACAGGCGCATGCCACCCCACTAAGCTA
ATTTTTCTATTTTTTG CAGAGACAGGGTTTTGCCGTGTTGCCTAGGTTGTTCTCAAACCTCCTGAGCTCAAGCCTG
CCTCAGCCTCCCAAAGTGTGGGATTACATGTGTGAGCCACCATGCCTGGCCGTC ACTAATCTTCAAGGTTAATA
TTTGGAGGACCCATCCAGAGTCCAAAGGTGGTCTTCGAGGGATAGCACGAGGTGGTCTGACAGGACTAACACTTA
CCAGCCTCTATGCACTATATAATAACTGGGAGCACATGAAAGGCTCCTTGCTCCAACAGTCACTCTGAAGATTTT
GCCAACTCATGAATGGAGGACACTTCAGTAGTCATCTAGATCCTTTTATAAGACAGTTTGAGATTATTCTCTCTC
TTCTACCTACAATTAGTTTGAAAAATTGGAGATTTTGATTTGCTGTGATGAAATCCTGGATGGCTGACCAAGAC
TGGCACTTGTTCCAGCCATTAGTGAGTTGAAGCCAAAGCCCTTTGGTGACTCACTGAGTACCATGGTTCTGTTCT
CCTCTGGAGATCTTGACGTATCTGTTTTCTCCCCATGAACTAGAAAACCACTTACTCCCAGAATTCAGGTCTG
TGCTTGTTAGTACTATATCACCAAGTCCATTCAATTAATGATCCAAAAC TGTAAATGTTGCACTGTATTCCAAATA
AAGGGTAAAAACAGAACCAAAGGTATAACTCCAAAAAAAAAAAAAAAAA

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FIGURE 1281

GTCCTCTCTGCTCTCGCGGCCGACTCGCAAGATGGCGCCGCAGAAAGACAGGAAGCCCAAGAGGTCAACCTGGAG
GTTTAATTTGGACCTTACTCATCCAGTAGAAGATGGAATTTTTGATTCTGGAAATTTTGAGCAATTTCTACGGGA
GAAGGTTAAAGTCAATGGCAAACTGGAAATCTCGGGAATGTTGTTTACATTGAACGCTTCAAGAATAAAATCAC
AGTTGTTTCTGAGAAACAGTTCTCTAAAAGGTATTTGAAATACCTTACCAAGAAATACCTTAAGAAGAACAATCT
TCGTGATTGGCTTCGAGTGGTTGCATCTGACAAGGAGACCTACGAACCTTCGTTACTTCCAGATTAGTCAAGATGA
AGATGAATCAGAGTCGGAGGACTTAGGCAAAGGCTCCCCTTACAGGGCTTTGCTTATTAATAAAATAAATGAAGTA
TACATGAGAAATACCAAGAAATTGGCTTTTAGTTTATCAGTGAATAAAAAATATTATACTCTTG

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FIGURE 1282

SSLLSRPTRKMAPQKDRKPKRSTWRFNLDLTHPVEDGIFDSGNFEQFLREKVKVNGKTGNLGNVVHIERFKNKIT
VVSEKQFSKRYLKYLTKKYLKKNLRLDWLRVVASDKETYELRYFQISQDEDESESED

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FIGURE 1283

CTAACTTTGAGTCAACGCTGACTACAGCACCAGGACTGCTCACTTCCAGCTTCTGCTGACACCTGCCCTCGTTTA
GTCTTTCTTGGTGGCTGCAGGTTTCAGTAGAACTCTATGCCAGGCTTTGTCTCCGGGACATAGGAGAGTGCTGGT
GCTCAGTCATGTTTGTGAATGAGTAATAAATGGTAAAGGTTGTTGCTGCCCGAGACGCTTCAAGAGGAAGCAG
CCCCCTAACCCAGCTGGGAGGAGGAGGAAGAATCCTGGGCTGGTCAGTTGGGGAAGGAGCTGAGCAGGCCGGGC
CACCTGGGCTGACACAGCACGAGCACCACGTGGATGGGATGCCTGCAGTCAGCTGCAGGAGGGCCTCGTCGGGAG
GCCACAGGGCCCTCTTTTGTCTTGAATGGAGACCTCCAAGGCTCCAGGACATAAAGGGCCTTGCCCAAGCTGTT
CCTGGCCACCTGGCCACATCTCCAGCTGCACCAGTTCTCACCTCCATTCGCCACGGCCCCAGCTGTGAGGTTTTA
GGGTGGCAGAGAGCTCCATGCACCCCTGGCCTTGGCCTCTTCTGGGGCTTAGAGCTCCAGGACTTTTGGGCCTG
TGCACCTCAGCGTCCCTCTTACGACTCCGGCGAGGACGGCCAGGTGCCTGGTGGACTCTTGACGTGCTCAGC
CACGAGACCTCATGTGCGTGTCTGAGCCACCTGTGTCTCAGATGTTCCAGGTCATCCAGCCAGAGCGTGCG
CTGTACATCCAGGCCAACAACTGCGTGGAGGCCAAGGACTGGATCGACATTCTACCAAAGTGAGCCAGTGCAAC
CAGAAGCGCCTCACCGTCTACCACCCGTCCGCTACCTGAGCGGCCACTGGCTGTGCTGTAGGGCGCCATCCGAC
TCGGCTCCGGGCTGCTCGCCCTGCACTGGCGGCCTCCAGCCAACATCCAGCTGGACATTGATGGGGACCGTGAG
ACGGAGCGTATCTACTCCCTCTTCAACTTGTACATGAGCAAGCTGGAGAAGATGCAGGAGGCCTGTGGGAGCAAA
TCTGTGTATGACGGCCCGGAGCAGGAGGAGTATTGACGTTTCGTCATTGACGACCCCCAGGAGACCTACAAGACG
CTAAAGCAAGTCATCGCTGGGGTTGGGGCTTTGGAGCAGGAGCACGCCAGTATAAGAGGGACAAGTTCAAGAAG
ACGAAATATGGAAGCCAGGAGCACCCCATCGGAGACAAGAGCTTCCAGAATAACATCCGGCAGCAGTCCGAGACC
TCCACTCATTCCATTTAAAGTCTGCGGGACGCGCCAGTGGCGCCAGCAAGCTGCCCATGCAAAGCCGCAGCCTT
TGGGAGGGAGAAGAGAAGGAAGAGCGCAGAGCCGGCAAAGTGAGATGCACGCCGTCCGGCCCATAGACAAGTGG
CGCTGGGGTTTTCCCTCTCCAGAACCGCTGCCACCACCGCCACGCCCTCCGCAGAAAGCCACCTGGCCCTGTGG
AACGTGTGCTCATTGTGATTCTGTGCTTTTTGCTCCTTGTGTGGGGATCTGGGGATCAGCTGAAGGATCAGGAA
GTGTGGGCTGTGCCCTAGCCACACCACAGCCAGCCTCAGGGAGCCACGGCCCGTCTAGTCGACTGTGACATGCAC
CTCCGGCCGTGTGTGCGTCAGTCTCGTGCACGTCTGTCTTGCCTTGACGGTGCCTGTGACGCTGGGCTCTGTGG
CTCTGTGCCCCGGGAGGCCCTGCTGGCCCCGCTCGGCTTTCGGCTTCATCACATTGGGAGGTTTCAGAGCATTACTC
TCCACTGTGCCCTGCCATCCAGGCAGCCATGGGAGGCGGCCCTCCCTGTTCCACTTTCGAGGTTTCGTTTGATTCTT
GGCTGAGGGGTCAGTTTTATGGCTGGGAGGTGCAGAAATACACAGAAGTCCCAGTCTGAGGATGTCCTTGGTGCT
TGGGGGATACGGGTTCTGTCCACAGAGTCCCTTGGAGGGAAAGGTGTGGGCTCCAGCTTCTCCAGGCGTCTGCGG
AGCCACAGTTGAAGCCACATCGTTTTGCTGTTGAATGGGGTTTAAATCAGAATTAACATTTGCCACCCCCCG
TGGAAGTTTGAAGATTTTAAAAATAGAAATGTACATTTTCAAGCTGTTTTCTTTATGTTTTTGAAGGACCATT
TTAATTAGCTCTTTGATACAAAGTAACTCAGAACGTCAAAACCTATACCCACTAAAGGGAAGGCTGCCGGGAAG
GCAATGGAACAGGAATGGAGCCTGTCTCAGGAAGGCCAGCTGCAGGTCTCCAGAAAATCAAAGAAGGGAAGAA
ACTCTGAGTTTGAGGTACAGGGGCTTCGGGGTGACAGCTCCCTCCAGGGCCCATGGTCAGTATTGCACCTGTGT
TATGAACCCCAAGATGCTGTGCAGGGCAGGGGCGGGGGCTGCTGTTTTATTGGGGAGGGGAGCATCCTAAAAATG
GGGTCCAGGCAGACCCCTCCAGACCTCACACTGCCGAGGAGGCCCTTCCCAAAGGGCGTCTCCCGGGATGCAGA
CGGCAGGTGTGTGGGAAGCGCCGTTTAAATACACAGCACGACGTATCCTTGTACCGACTTCTCCCGGTTCTTGT
TGAAAATACTGTAGTTTCAAGCTCTTGATCTAGATGGCAGATAGGAACCTTCTTGTACAAAAATACTGGAGGAAA
ATGTTGTAAAAATAGACTTTTGGACACACAGCTGTTGGGGCTGCACTGAGCTGCAATTTTTAACATGGATTTATA
ACTTAATGTTTCTGTTTATAAAATACTAATGATTGCAATGTATTTTACTGGCCAATTAACAGATGTTTTATT
CTTTCTGAA

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FIGURE 1284

MFQVIQPERALYIQANNCVEAKDWIDILTKVSQCNQKRLTVYHPSAYLSGHWLCCRAPSDSAPGCSPCTGGLPAN
IQLDIDGDRETERIYSLFNLYMSKLEKMQEACGSKSVYDGPEQEEYSTFVIDDPQETYKTLKQVIAGVGALEQEH
AQYKRDKFKKTKYGSQEHPIGDKSFQNYIRQQSETSTHSI

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FIGURE 1285

GTGCAGTTGCGGCTCCAGGGCCATGGCGGAGGAGCAGGGCCGGGAACGGGACTCGGTTCCCAAGCCGTCGGTGCT
GTTCCCTCCACCCAGACCTGGGCGTGGGCGGCGCTGAGCGGCTGGTGTGGACGCGGCGCTGGCGCTGCAGGCGCG
CGGGTGTAGCGTGAAGATCTGGACAGCGCACTACGACCCGGGCCACTGTTTCGCCGAGAGCCGCGAGCTACCGGT
GCGCTGTGCCGGGGACTGGCTGCCGCGAGGCCTGGGCTGGGGCGGCCGCGGCGCCCGCTCTGCGCCTACGTGCG
CATGGTTTTCTGGCGCTCTACGTGCTGTTCCCTCGCCGACGAGGAGTTCGACGTGGTAGTGTGCGACCAGGTGTC
TGCCTGTATCCAGTGTTTCAGGCTGGCTAGACGGCGGAAGAAGATCCTATTTTACTGTCACTTCCCAGATCTGCT
TCTACCAAGAGAGATTCTTTTCTTAAACGACTATACAGGGCCCCAATTGACTGGATAGAGGAATACACCACAGG
CATGGCAGACTGCATCTTAGTCAACAGCCAGTTCACAGCTGCTGTTTTTAAGGAAACATTCAAGTCCCTGTCTCA
CATAGACCCTGATGTCTCTATCCATCTCTAAATGTCACCAGCTTTGACTCAGTTGTTCTGAAAAGCTGGATGA
CCTAGTCCCCAAGGGGAAAAAATTCTGCTGCTCTCCATCAACAGATACGAAAGGAAGAAAAATCTGACTTTGGC
ACTGGAAGCCCTAGTACAGCTGCGTGGAAGATTGACATCCCAAGATTGGGAGAGGGTTCATCTGATCGTGGCAGG
TGGTTATGACGAGAGAGTCTGGAGAATGTGGAACATTATCAGGAATTGAAGAAAATGGTCCAACAGTCCGACCT
TGGCCAGTATGTGACCTTCTTGAGGTCTTTCTCAGACAAACAGAAAATCTCCCTCCTCCACAGCTGCACGTGTGT
GCTTTACACACCAAGCAATGAGCACTTTGGCATTGTCCCTCTGGAAGCCATGTACATGCAGTGCCAGTCATTGC
TGTTAATTCGGGTGGACCCTTGAGTCCATTGACCACAGTGTACAGGGTTTTCTGTGTGAGCCTGACCCGGTGCA
CTTCTCAGAAGCAATAGAAAAGTTTATCCGTGAACCTTCTTAAAAGCCACCATGGGCCTGGCTGGAAGAGCCAG
AGTGAAGGAAAAATTTTCCCTGAAGCATTACAGAACAGCTCTACCGATATGTTACCAAATGCTGGTATTAATC
AGATTGTTTTTAAGATCTCCATTAATGTCATTTTTATGGATTGTAGACCCAGTTTTGAAACCAAAAAAGAAACCT
AGAATCTAATGCAGAAGAGATCTTTTAAAAAATAAACCCTTGAGTCTTGAATGTGAGCCACTTTCCTATATACCACA
CCTCCCTGTCCACTTTTTCAGAAAAACCATGTCTTTTATGCTATAATCATTCCAAATTTTGCCAGTGTTAAGTTAC
AAATGTGGTGTCAATCCATGTTTCAGCAGAGTATTTTAATTATATTTTCTCGGGATTATTGCTCTTCTGTCTATAA
ATTTTGAATGATACTGTGCCTTAATTGGTTTTCATAGTTTAAGTGTGTATCATTATCAAAGTTGATTAATTTGGC
TTCATAGTATAATGAGAGCAGGGCTATTGTAGTTCCCAGATTCAATCCACCGAAGTGTTCACTGTCACTGTGTTAG
GGAATTTTTGTTTGTCTGTCTTTGCCTGGATCCATAGCGAGAGTGCTCTGTATTTTTTTTAAGATAATTTGTAT
TTTTGCACACTGAGATATAATAAAAGGTGTTTATC

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FIGURE 1286

MAEEQGRERDSVPKPSVLFLHPDLGVGGAERLVLDAALALQARGCSVKIWTAHYDPGHCF AESREL P VRCAGDWL
PRGLGWGGRGAAVCAYVRMVFLALYVLF LADEEFDVVVCDQVSACIPV FRLARRRKKILFYCHFPD LLLTKRDSF
LKRLYRAPIDWIEEYTTGMADCILVNSQFTAAVFKETFKSLSHIDPDVLYPSLNVTSFDSVVP EKLDDLV PKGKK
FLLLSINRYERKKNLTLALEALVQLRGRLTSQDW ERVHLIVAGGYDERVLENVEHYQELKKMVQQSDLGQYVTF L
RSFSDKQKISLLHSCTCVLYTPSNEHFGIVPLEAMYMQCPVIAVNSGGPLESIDHSVTGFLCEPDPVHFSEAIEK
FIREPSLKATMGLAGRARVKEKFSPEAFTEQLYRYVTKLLV

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FIGURE 1287

AAGTAAGAATTATAAATCTATCTCAGTTAAAAGTAGGATCTTTGTTTTTATTTCAGATATTTTGAAAGTTTAGAAG
CATTTTGTATGCTACTTTGGTATTTCTTAAGTATAGTCAGCAGGAAAGGGTAACCTGTTTTATGCAAAATTTTTT
TAATTTGTCAAATGTTTTTAGTGTGTCTACTTTCTGAAATAGTCTCAATATCCTGTCTGTATCCTAGGCAGATAA
CTACACAAGAACAAAACGCTATATAGAAAAGAAAATATTTGAGGAAATCTTAAATTCATAAGAAAGTAATTCTT
GCAAGAATGTTGGCTACATATTTTTTTTTCTGTCTGAATAAATTACATCATTAGGTCTGTTGAAGCTTTTGAAG
CTACCACTATTCTTTCTGGGATAAAGGCTAATTACTGATTTATCTGCCCTCAAATCCCAGAGTTAATTCTAATT
GAGTACTAAATTAACAGTAAGTAGTTAACACAGAGAACTAAAATTTAACCGCATTATATCACTGTATATATTTCT
CATGATTTTTGCTAATTAGAGCATTACTTAACCAGTAATAAACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNGTGTGTGTGTATATACTTGGCTCTGACACAACCTCTGGTGCTTAATTAGGATATGTTCTATTATGTATTTTG
AATGTTTATCCTGCTAGTGCATGAACTTTTGTTGGAAAAGCAGAATTAGAAGGAACAGTTTTTCAATCAGTTTC
ATTTGGTAATTACAGGAAAACCTTGAGTTGCTCTAATTTAATTTTTCCAATTAATACATTTAGACTTTAAATTGC
ATCCGTAATTCTCTTGGCTGAAAAACAGTGGTATTTTAAGACAGTTTTGTTATACATGTGACTTACTTTTGACTC
AGCCTGAGAGGAGGAAATGTAAAGAGATAAGAGATTTGGCCCAAAGCAGCAAGAGACTAGTAACCTTGAGCCAGG
ACGAAGCCAAGACAACGTGACTCCCAAGTAGCAGGAGCAGAGGTCGGTCACCTGTGGCATTCTGTTTCATTCCCT
TTTAAAATTATGAGACTTTATAGGCAGTGTAACATCAGCAGGCAGCGATGTGATAGGATGTGCGAAAAAGCTG
GTCTGATACCATGGCTATAATTACAGAGCTTTAGTTCAATTAGGATTTTGTAAATGAGCAAATGACCTTTTTTTC
CAGTGCCCCCTTGTAATAGTTAATATGAGTCCATGCAATCTTGTGATGCCATTCTCCTGAAGGTGTTGATTTCTGG
TACCCAGCCAGCTTAGCTTTGGCTGCTGGAAGCACAGTAGGTACTGATGATTACTTCTGGAATCTTGACAGGC
TTATTGTACTGTGTAATGGGGAAAAGTTAAAGTATAATGTTTGGTGTTAATAAATGACTGATGTGAAAATAGGAA
CATGTGTCTTTAATATCAAATATGGCTTTATTTGCAGTGAAATCTAAATTCCTTATTCTACAGTAGTATTTCTT
GCCCTGTGTTGTATATTTTCTAAATACATTTTTTCTGACAGTGGCTTTAGGCCAGTTGAACACACTTAGACTGA
AAGTGTTTAACTTAAAGAGATCAGTCCAGAAACCATGATAAATTAGAATCTTTATCTGGAATTACCAAATTA
TTTAAATCATGGTCCAGAAGAGAACAAACATTCATGGTTTTTTTTATCCTACTGCTCATTTTTAGGTCTGTGTT
TACATCTAGTCTCTACTATTTGTGAAGTATGTCATTATTTTTTCAAGTTCTTCTTTGACTTAACTGAAAAATA
TATCCAAATCTTAATGTAACATGAAAAGAGAAATACAATTTTGCTTAAAGACATTTTTTAAAAAGCGTTCA
ATTCAGTAATCATTCTGTTAATACAGGAAGTTTTTTGGCTTGCCAGTTATATACTGTGGGTATTTTTTAAAT
GTGCTACCCCTGGGTTGTCTCATATCACCTTGCGTAATCATGTATTACAAAGGTTGATAATTGTCATTTCTCAGA
TGCTGTATGTTACATTGGCAGCAGTAAAATGTTTTAATGTTGTACCTTTTAAATAATTGTGTTGTATTACAT
GCCTCATATTTCTGGGGAACTTGAAATATATCTAAACAAAAAAGGTCTGTTATAAATAGGAATTGGCATTTC
TTGTTAATGTTTTTCTCATAAAAATAGTTACACCAAAAGTGACATATTGCTATTACATGGGCCCAATCAGTA
TTAAAGTACTCCCTTACTCAAAAATATTAATAAATAATTATCATGACACTTAGTAGCATTTTCATTGATTGTTTCA
AAAGATCTTCATAATGGTCAAATTGTCCAATTCACAAAAGAGTGAGAAAGTTGTTTTCAGTACTGGGAATTTTTA
AACCTTAGTTTTAAGACCAAAAATATCTTATTAGCTTGAACATTTTGTGATTACTTTTCCCTCCCGGATCTA
GTCCTTTTAAGGAGTAAGTCTAAAGAATGAGGCCATGAAGTCACTATTTCTCCACCTCAGTTTGTCTCCTGGT
ACTTAGCTGGCCTATCGCTTTGTGTGGCAATACCCCTGGGTCGCTTCCCCACTCAGCCTTCTGTATCTGCTGTT
ACAGGACATGCCATTATGTCTTT

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FIGURE 1288

MKSLFPPTSVCLLVLSWPIALCGNTPGSLPHSAFCICCSQDMPLC

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FIGURE 1289A

TACTGGACAAACATTTCTCTCCAAGGACACAGCTCTCTGCCTCCATGTCACCACCTTTGAAGGACTGACTGATTCC
CTCGGCTGGTGCCAGTGCCTGCTCCTGCCATGGGGCCCCGCGGGGAGCCTGCTGGGCAGCGGACAGATGCAGATCA
CCCTGTGGGGAAGTCTGGCAGCTGTGCGCCATTTTCTTCGTATCACCTTCCTCATCTTCCCGTGCTCTAGTTGTG
ACAGGGAAAAGAAGCCGCGACAGCATAGTGGGGACCATGAGAACCTGATGAACGTGCCTTCAGACAAGGAGATGT
TCAGCCGTTTCAGTTACTAGCCTGGCAACAGATGCTCCTGCCAGCAGTGAGCAGAATGGGGCACTCACCAATGGGG
ACATTCTTTTCAGAGGACAGTACTCTGACCTGCATGCAGCATTACGAGGAAGTCCAGACATCGGCCTCGGATCTGC
TGGATTCCCAGGACAGCACAGGGAAACCAAAATGTCATCAGAGTCGGGAGCTGCCAGAATCCCTCCCGAGAGCG
CAGTGGATACCATGCTCACGGCGAGAAGTGTGGACGGGGACCAGGGGCTGGGGATGGAAGGGCCCTATGAAGTGC
TCAAGGACAGCTCCTCCCAAGAAAACATGGTGGAGGACTGCTTGTATGAACTGTGAAGGAGATCAAGGAGGTGG
CTGCAGCTGCACACCTGGAGAAAGGCCACAGTGGCAAGGCCAAAATCTACTTCTGCCTCGAAAGAGCTCCCAGGGC
CCCAGACTGAAGGCCAAAGCTGAGTTTGCTGAATATGCCTCGGTGGACAGAAACAAAAAATGTCGTCAAAGTGTTA
ATGTAGAGAGTATCCTTGGAATTCATGTGATCCAGAAGAGGAGGCCCCACCACCTGTCCCTGTTAAGCTTCTGG
ACGAGAATGAAAACCTTCAGGAGAAGGAAGGGGGAGAGGCGGAAGAGAGTGCCACAGACACGACCAGTGAAACTA
ACAAGAGATTTAGCTCATTGTATACAAGTCTCGGGAAGAAGACCCCACTCTCACAGAAGAAGAGATCTCAGCTA
TGTAATCATCAGTAAATAAACCTGGACAGTTAGTGAATAAATCGGGGCAGTCGCTTACAGTTCCGGAGTCCACCT
ACACCTCCATTCAAGGGGACCCACAGAGGTACCCCTCCTCTGTAATGATCTCTATGCTACTGTTAAAGACTTCG
AAAAAATCCAAACAGCACACTTCCACCAGCAGGGAGGCCAGCGAGGAGCCAGAGCCTGATTATGAAGCGATAC
AGACTCTCAACAGAGAGGAAGAAAAGGCCACCCCTGGGGACCAATGGCCACCACGGTCTCGTCCCAAAGGAGAACG
ACTACGAGAGCATAAGTGACTTGCAGCAAGGCAGAGATATTACCAGGCTCTAGCAACCCAGAAGACAACCCCTGGG
TAGCCTGTGATCAGTGTCTGGAGACGTTTCTTCTGTGGAAGAGAAGAAGTGACACAAACCTATACTTCATATGCT
GCTTTAGTCACCTGAAGATGGTTGGAGAGGCCCTGTCGACTGTTCTCCAGTTGTTTCAGTTTCTGAGACAGAGAG
GTACGGACTAGGCTGCACCTGAGTGTGCCCCCTGCCTGCCAGATGGACAGGTACACCCAAGCACATCTCCCTGCTG
CACCTCACCAACCCACAAAAGATCCCAGCTGTCACTGGTCTCATCTCATTAGTGAGGAAAGCCAAGCTGTATGGA
AAAGCTGCACCTACCAAGGACCACAATGCCCCCGGCCATAAGTACTGCCATTAGAAAAGCAGGTTTTTCTTCTCT
CTCTTTCTTTTCTCTGTCTGCTACTGACTTTAAGGCTTTTTCCCCCTTGAAATGTCCAGATTCTGTGGTTTCAT
CCCAAGGAAATTTTACACAAAAGCTTGGCCTTTGCCCTCAATATAGGTGTTTTAGGATGGTGACAAACCATGGCT
GCTGCTTTCTGCCAGCTCGCCAGTCTCTCCCAAGAGTTGCGCATCAGCACCTGGGGATCTGGACCCTGCGGGT
GAAGGGATGGGGAGGGACGTCCCTGGAGTCTCTTCTGTCTTTGTTCCCTTCTTATTTTGGCATTGATATCAGCAG
CCTCTCCCCAAAGTACTTGAAGTCAGTTTTAGATGCTTTATTTTATTTTCTAGTCAAAAACGTGTTTCCCCCAG
TGTTTGAAACTCGTCCGAATCTTTTCAGTATTTTCCATGAGTATTGTGGTACTTCTAGACTTGTTTAAAGCCAG
AACTCATTCCTTCAAAACAGAGAGCCTTAATCTTTATGTTGGGACACAGACCACATATTTGGACGGCAGCCATGC
ATCCATCGCTGAAGGGCTGTGGACATGAATGTGTATTTCCCATGGTCTCCGCTGCCACACCAACAGTGTGGCAT
CTCATAAGTTAACTGCTACCCTAAGGTAATCTAAGATTAAAAATGTAAACATTTATTTTTGTTATGTAAGTTTATA
AGATGTTTTATGTTCAATGCCTAATTTCTCAAAAGTGCCAGAAAAAATGTATATTAGCTATTTTGATTTTATGT
ACAATGATTTTATACTCTCTTTTGAAGAGATACCATAAAGCACATAAGCTAGATCACTACAAGGAGCTGTTATCT
TTTTTCTAATCAAGTGTTTAAACACTGATGGTTTTTAAAGACTCACCTTTTTAAATGGTACTTGGAGCTCCTGA
TTCAAATACCTAGACCCCTAGAGAAATAAATGGAATATACATAAATAATCATTTTTCAGTGGTTTATGGTGGGC
AATATTGCAATATTTGAAATGGTAAAAATGGAAGAAGAACAAAATATGATGAGAGGTGGCTGTGAATTATAAAC
CTCATAAAAGTGTCATAATTCCATTAAAGGTTTAATTATATTTTTTCAGAAAACAGTGATGAATTCTGTAGTCCAG
TGCTTGCCAAATGCAAATTGCCTATTGGAATCTTCTTCTATATTTTACAAACATCAGTGGCTGAAATAGCTCAGA
GTAAGAGCTCAGCCTGGTTTGAATTTAATCATCTCTTTAGATCTTATAAGGCCAGCATTAGGAAACTTGTTCACT
TTTCATTTTCAAAGGAGCCTAGTTGAAGTGCTATTATGAGTGTGGGCTATGGAAGACAGCTTTTCTTACACTGA
TAAAGAAAAAATGAGGAAATATTTTCATCCCCTGTGACATCTGTGACTTTTTGGATTTAATAATCTTGCTGT
TTTTCTCTTTATGACAAAGAATATAATTGGGAGGATGAAGTGCTTAAAAATGTAGAGACCAGCTCACTGGAA
TGTTTTCCATCCCTGTATTTCATGGCTTGACTTTGTGACTGCTCTACACTGCATGTCTGACATTGCAGAGTGAGC
TATGTTGAGGTAACTGGTTGGTTGTCATTATTTTGAATCAGCCTGGTCTCTCCCATGAAGATGTCGTGTGCAT
AAGCACAATCATCACTGATTAGAAGATCACAGCAGAATACCCTTGGATTAGAGAGAAGTTCGTACCTTGCAATTC
TCTGAATCTAGTCTCTCATAAGCACTGCTTTGCTGGATGATTTTCACTGCTTTGTGTTAATGACTTTGAGCGAT

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FIGURE 1289B

CTCTCACATGATGGGGTTCTTTAGTACATGGTAACAGCCATGTCATCTTACACACCTAGCATTGTGAATGCTGTA
GTGACATCCTTTATAGGCACCTTACAGCTCAAAACTTTTGTTCATTCATGCCTTACTTATCAAAAAGGCAGGA
AAGTAGGTATGATCTCTAAAGTAAAAAAA

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FIGURE 1290

MGPAGSLLGSGQMQITLWGSLAAVAIFFVITFLIFPCSSCDREKKPRQHSGDHENLMNVPSDKEMFSRSVTSLAT
DAPASSEQNGALTNGDILSEDSTLTCMQHYYEEVQTSASDLLDSQDSTGKPKCHQSRELPRIPPESAVDTMLTARS
VDGDQGLGMEGPYEVLDSSSQENMVEDCLYETVKEIKEVAAAAHLEKGHSGKAKSTSASKELPGPQTEGKAIFA
EYASVDRNKKCRQSVNVESILGNSCDPEEEAPPPVPVKLLDENENLQKEGGEAEESATDTTSETNKRFSLSYK
SREEDPTLTEEEISAMYSSVNKPGQLVNKSGQSLTVPESTYTSIQGDPQRSPSSCNDLYATVKDFEKTNPSTLPP
AGRPSEEPEDYEAIQTLNREEEKATLGTNGHHGLVPKENDYESISDLQQGRDITRL

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FIGURE 1291

AGCTATTTCAAGGCGCGCGCCTCGTGGTGGACTCACCGCTAGCCCGCAGCGCTCGGGCTTCCTGGTAATTCTTCAC
CTCTTTTCTCAGCTCCCTGCAGCATGGGTGCTGGGGCCCTCCTTGCTGCTCGCCGCCCTCCTGCTGCTTCTCTCCG
GCGACGGCGCCGTTGCGCTGCGACACACCTGCCAACTGCACCTATCTTGACCTGCTGGGCACCTGGGTCTTCCAGG
TGGGCTCCAGCGGTTCCAGCGCGATGTCAACTGCTCGGTTATGGGACCACAAGAAAAAAGTAGTGGTGTACC
TTCAGAAGCTGGATACAGCATATGATGACCTTGGCAATTCTGGCCATTTACCATCATTTACAACCAAGGCTTTG
AGATTGTGTTGAATGACTACAAGTGGTTTGCCTTTTTTAAGTATAAAGAAGAGGGCAGCAAGGTGACCACTTACT
GCAACGAGACAATGACTGGGTGGGTGCATGATGTGTTGGGCCGGAAGTGGGCTTGTTTACCCGAAAGAAGGTGG
GAACTGCCTCTGAGAATGTGTATGTCAACACAGCACACCTTAAGAATTCTCAGGAAAAGTATTCTAATAGGCTCT
ACAAGTATGATCACAACCTTTGTGAAAGCTATCAATGCCATTGAGAAGTCTTGGAAGTCAACTACATACATGGAAT
ATGAGACTCTTACCCTGGGAGATATGATTAGGAGAAGTGGTGGCCACAGTCGAAAAATCCCAAGGCCCAAACCTG
CACCCTGACTGCTGAAATACAGCAAAAGATTTTGCATTTGCCAACATCTTGGGACTGGAGAAATGTTTCATGGTA
TCAATTTTGTGAGTCTGTTTCGAAACCAAGCATCCTGTGGCAGCTGCTACTCATTTGCTTCTATGGGTATGCTAG
AAGCGAGAATCCGTATACTAACCAACAATTCTCAGACCCCAATCCTAAGCCCTCAGGAGGTGTGTCTTGTAGCC
AGTATGCTCAAGGCTGTGAAGGCGGCTTCCCATACCTTATTGCAGGAAAGTACGCCCAAGATTTTGGGCTGGTGG
AAGAAGCTTGCTTCCCCTACACAGGCACTGATTCTCCATGCAAAATGAAGGAAGACTGCTTTTCGTTATTACTCCT
CTGAGTACCACTATGTAGGAGGTTTCTATGGAGGCTGCAATGAAGCCCTGATGAAGCTTGAGTTGGTCCATCATG
GGCCCATGGCAGTTGCTTTTGAAGTATATGATGACTTCCTCCACTACAAAAGGGGATCTACCACCACACTGGTC
TAAGAGACCCTTTCAACCCCTTTGAGCTGACTAATCATGCTGTTCTGCTTGTGGGCTATGGCACTGACTCAGCCT
CTGGGATGGATTACTGGATTGTTAAAAACAGCTGGGGCACCGGCTGGGGTGAGAATGGCTACTTCCGGATCCGCA
GAGGAAGTATGAGTGTGCAATTGAGAGCATAGCAGTGGCAGCCACACCAATTCCTAAATTGTAGGGTATGCCTT
CCAGTATTTTATAATGATCTGCATCAGTTGTAAAGGGGAATTGGTATATTACAGACTGTAGACTTTCAGCAGCA
ATCTCAGAAGCTTACAAATAGATTTCCATGAAGATATTTGTCTTCAGAATTAAACTGCCCTTAATTTTAATATA
CCTTTCAATCGGCCACTGGCCATTTTTTTCTAAGTATTCAATTAAGTGGGAATTTTCTGGAAGATGGTCAGCTAT
GAAGTAATAGAGTTTGCTTAATCATTTGTAATTCAAACATGCTATATTTTTTAAATCAATGTGAAAACATAGAC
TTATTTTTAAATTGTACCAATCACAAGAAAATAATGGCAATAATTATCAAACTTTTAAATAGATGCTCATATT
TTTAAATAAAGTTTTTAAAAATAACTGCA

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FIGURE 1292

MGAGPSLLLAALLLLLSGDGAVRC DTPANCTYLDLLGTWVFQVGSSGSQRDVNCSVMGPQEKKVVVYLQKLD TAY
DDLGN SGHFTIIYNQGF EIVLNDYKWF AFFKYKEEGSKVTTCNETMTGWVHDVLGRNWACFTGKKVGTASENVY
VNTAHLKNSQEKYSNRLYKYDHN FVKAINAIQKSWTATTYMEYETLTLGDMIRRS GGHSRKIPRPKPAPLTAEIQ
QKILHLEP TSWDWRNVHGINFVSPVRNQASCGSCYSFASMGMLEARIRILTNN SQTPILSPQEVVSCSQYAQGCEG
GFPYLIAGKYAQDFGLVEEACFPYTGTDSPCKMKEDCFRYSSEYHYVGGFYGGCNEALMKLELVHHGPM AVAFE
VYDDFLHYKKGIYHHTGLRDPFNP FELTNHAVLLVGYGTD SASGMDYWI VKN SWGTGWGENGYFRIRRG TDECAI
ESIAVAATPIPKL

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FIGURE 1293A

CGACTCCTTAGAGCATGGCATGGCTCAGAGGTGCTGGTAAACTGATGGGGGTTTTTGCTGTCCCTCCCTCAGC
GCCGACACC**ATGT**GGATCCAGGTTCCGACCATGGACGGGAGGCAGACCCACACGGTGGACTCGCTGTCCAGGCTG
ACCAAGGTGGAGGAGCTGAGGCGGAAGATCCAGGAGCTGTTCCACGTGGAGCCAGGCCTGCAGAGGCTGTTCTAC
AGGGGCAAACAGATGGAGGACGGCCATACCTCTTCGACTACGAGGTCCGCCTGAATGACACCATCCAGCTCCTG
GTCCGCCAGAGCCTCGTGCTCCCCACAGCACCAAGGAGCGGGACTCCGAGCTCTCCGACACCGACTCCGGCTGC
TGCCTGGGCCAGAGTGAGTCAGACAAGTCCTCCACCCACGGCGAGGCGGCCGCCGAGACTGACAGCAGGCCAGCC
GATGAGGACATGTGGGATGAGACGGAATTGGGGCTGTACAAGTCAATGAGTACGTGATGCTCGGGACACGAAC
ATGGGGGCGTGGTTTGAGGCGCAGGTGGTCAGGGTGACGCGGAAGGCCCCCTCCCGGGACGAGCCCTGCAGCTCC
ACGTCCAGGCCGGCGCTGGAGGAGGACGTCAATTTACCACGTGAAATACGACGACTACCCGGAGAACGGCGTGGTC
CAGATGAAGTCCAGGGACGTCCGAGCGCGCGCCCGACCATCATCAAGTGGCAGGACCTGGAGGTGGGCCAGGTG
GTCATGCTCAACTACAACCCCGACAACCCCAAGGAGCGGGGCTTCTGGTACGACGCGGAGATCTCCAGGAAGCGC
GAGACCAGGACGGCGCGGGAAGTCTACGCCAACGTGGTGCTGGGGGATGATTCTCTGAACGACTGTCCGATCATC
TTCGTGGACGAAGTCTTCAAGATTGAGCGGCCGGGTGAAGGGAGCCCCATGGTTGACAACCCCATGAGACGGAAG
AGCGGGCCGTCTGCAAGCACTGCAAGGACGACGTGAACAGACTCTGCCGGGTCTGCGCCTGCCACCTGTGCGGG
GGCCGGCAGGACCCCGACAAGCAGCTCATGTGCGATGAGTGCGACATGGCCTTCCACATCTACTGCCTGGACCCG
CCCCTCAGCAGTGTTCAGCGAGGACGAGTGGTACTGCCCTGAGTGCCGGAATGATGCCAGCGAGGTGGTACTG
GCGGGAGAGCGGCTGAGAGAGAGCAAGAAGAAGGCGAAGATGGCCTCGGCCACATCGTCTCACAGCGGGACTGG
GGCAAGGGCATGGCCTGTGTGGGCCGACCAAGGAATGTACCATCGTCCCGTCCAACCACTACGGACCCATCCCG
GGGATCCCGTGGGCACCATGTGGCGGTTCCGAGTCCAGGTCAGCGAGTCGGGTGTCCATCGGCCCCACGTGGCT
GGCATAACGGCCGGAGCAACGACGGAGCGTACTCCCTAGTCTGGCGGGGGCTATGAGGATGACGTGGACCAT
GGGAATTTTTTACATACACGGGTAGTGGTGGTCGAGATCTTTCGGCAACAAGAGGACCGCGGAACAGTCTTGT
GATCAGAACTCACCAACACCAACAGGGCGCTGGCTCTCAACTGCTTTGCTCCCATCAATGACCAAGAAGGGGCC
GAGGCCAAGGACTGGCGGTGCGGGAAGCCGGTCAGGGTGGTGCGCAATGTCAAGGGTGGCAAGAATAGCAAGTAC
GCCCCGCTGAGGGCAACCGCTACGATGGCATCTACAAGTTGTGAAATACTGGCCCGAGAAGGGGAAGTCCGGG
TTTCTCGTGTGGCGCTACCTTCTGCGGAGGGACGATGATGAGCCTGGCCCTTGACGAAGGAGGGGAAGGACCGG
ATCAAGAAGCTGGGGCTGACCATGCAGTATCCAGAAGGCTACCTGGAAGCCCTGGCCAACCGAGAGCGAGAGAAG
GAGAACAGCAAGAGGGAGGAGGAGGAGCAGCAGGAGGGGGGCTTCGCGTCCCCAGGACGGGCAAGGGCAAGTGG
AAGCGGAAGTCGGCAGGAGGTGGCCGAGCAGGGCCGGTCCCCGCGCCGACATCCAAGAAAACCAAGGTGGAG
CCCTACAGTCTCACGGCCAGCAGAGCAGCCTCATCAGAGAGGACAAGAGCAACGCCAAGCTGTGGAATGAGGTC
CTGGCGTCACTCAAGGACCGGCCGGCGAGCGGCAGCCCGTCCAGTTGTTCTGAGTAAAGTGGAGGAGACGTTT
CAGTGTATCTGCTGTGAGGAGCTGGTGTTCGGGCCCATCACGACCGTGTGCCAGCACACGTGTGCAAGGACTGC
CTGGACAGATCCTTTCGGGCACAGGTGTTAGCTGCCCTGCCCTGCCGCTACGACCTGGGCCGAGCTATGCCATG
CAGGTGAACCAGCCTCTGCAGACCGTCTCAACCAGCTCTTCCCCGGCTACGGCAATGGCCGGT**GTAT**CTCCAAGC
ACTTCTCGACAGGCGTTTTGCTGAAAACGTGTGCGAGGGCTCGTTTCATCGGCACTGATTTTGTCTTTAGTGGCT
TAACTTAAACAGGTAGTGTTCCTCCGTTCCCTAAAAAGGTTTGTCTTCCTTTTTTTTTATTTTTATTTTTCAAA
TCTATACATTTTACGAATTTATGTATTCTGGCTAAAAGTTGGACTTCTCAGTATTGTGTTTAGTTCTTTGAAAA
CATAAAAGCCTGCAATTTCTCGACAAAACAACAAGATTTTTTAAAGATGGAATCAGAACTACGTGGTGTGGA
GGCTGTTGATGTTTCTGGTGTCAAGTTCTCAGAAGTTGCTGCCACCAACTCTTTAAGAAGGCGACAGGATCAGTC
CTTCTTAGGGTCTGGCCCCAAGGTCAGAGCAAGCATCTTCTGACAGCATTTTGTCTATCTAAAGTCCAGTGA
CATGGTTCCTCGTGGTGGCCCGTGGCAGCCCGTGGCATGGCGTGGCTCAGCTGTCTGTTGAAGTTGTTGCAAGGA
AAAGAGGAAACATCTCGGGCCTAGTTCAAACCTTTGCCTCAAAGCCATCCCCACCAGACTGCTTAGCGTCTGAG
ATCCGCGTGAAAAGTCTCTGCCCACGAGAGCAGGGAGTTGGGGCCACGCAGAAATGGCCTCAAGGGGACTCTGC
TCCACGTGGGGCCAGGCGTGTGACTGACGCTGTCCGACGAAGGCGGCCACGGACGGACGCCAGCACACGAAGTCA
CGTGCAAGTGCCCTTGATTGCTTCTTTCTTAAAGACGACAGTCTTTGTTGTTAGCACTGAATTATTGAAAAAT
GTCAACCAGATTCTAGAACTGCGGTATCCAGTTCTTCTGACACCGGATGGGTGCTTGGGAACCGTTTGAGCC
TTATAGATCATTTACATTCAATTTTTTAACTCAGCAAGTGAGAACTTACAAGAGGGTTTTTTTTTAATTTTTTT
TTCTCTTAATGAACACATTTTCTAAATGAATTTTTTTGTAGTTACTGTATATGTACCAAGAAAGATATAACGTT
AGGGTTTGGTTGTTTTTGTATTTTTTTCTTTTGAAAGGGTTTGTTAATTTTTTCTAATTTTACCAAAGT

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FIGURE 1293B

TTGCAGCCTATACCTCAATAAAACAGGGATATTTTAAATCACATACCTGCAGACAAACTGGAGCAATGTTATTTT
TAAAGGGTTTTTTTTCACCTCCTTATTCTTAGATTATTAATGTATTAGGGAAGAATGAGACAATTTTGTGTAGGCT
TTTTCTAAAGTCCAGTACTTTGTCCAGATTTTAGATTCTCAGAATAAATGTTTTTCACAGATTGAAAAAAAAAAAA
AAA

1427/1629
FIGURE 1294

MWIQVRTMDGRQHTVDSLRLTKVEELRRKIQELFHVEPGLQRLFYRGKQMEDGHTLFDYEVRLNDTIQLLVRQ
SLVLPSTKERDSELSDTDSGCCLGQSESDKSSTHGEAAAETDSRPADEDMWDETELGLYKVNEYVDARDTNMGA
WFEAQVVRVTRKAPSRDEPCSSSTRPALEEDVIYHVKYDDYPENGVVQMNSRDVRRARTIIKWQDLEVGQVVML
NYPDNPKERGFWDYDAEISRKRETRTARELYANVVLGDDSLNDCRIIFVDEVFKIERPGEESPMVDNPMRRKSGP
SCKHCKDDVNRLCRVCACHLCGGRQDPDKQLMCDECDMAFHIYCLDPPLSSVPSSEDEWYCPECRNDASEVVLAGE
RLRESKKKAKMASATSSSQRDWKGGMACVGRTKECTIVPSNHYGPIPGIPVGTMRFRVQVSESGVHRPHVAGIH
GRSNDGAYSLVLAGGYEDDVDHGNFFTYTGSGGRDLGNGKRTAEQSCDQKLTNTNRALALNCFAPINDQEGAEAK
DWRSGKPVRVVRNVKGGKNSKYAPAEGNRYDGIYKVVKYWPEKGKSGFLVWRYLLRRDDDEPGPWTKEGKDRIKK
LGLTMQYPEGYLEALANREREKENSKEEEEEQQEGGFASPRGTGKGKWKRSAGGGPSRAGSPRRTSKKTKVEPYS
LTAQQSSLIREDKSNKLNWNEVLASLKDRPASGSPFQLFLSKVEETFQCICQELVFRPITTVQCQHNVCCKDCLDR
SFRAQVFSCPACRYDLGRSYAMQVNQPLQTVLNQLFPGYGNR

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FIGURE 1295A

GCGGCCGCAGCCCCGGCCGAGCAGGCGCCGCGGGCCAAAGGGCCGCCGAGACGGTCCCCAGAGAGCCACCGGAGG
AGCAGCTCACCTGAGAGACGGAGCCCCGGCTCGCCCGTGTGCAGAGCGGACAAGGCAAAATCTCAGCAAGTTCGG
ACCTCTAGTACAATAAGGCGAACCTCCTCTTTGGATACAATAACAGGACCTTACCTCACAGGACAGTGCCACGG
GATCCTCATGTTCACTACCCTTCATGCATGAAAGACAAAGCTACTCAGACACCTAGCTGTTGGGCAGAAGAGGGT
GCAGAAAAGAGGTCACATCAGCGTTCTGCGTCATGGGGGAGTGCTGATCAACTAAAAGAGCAGATCGCCAAACTG
AGGCAGCAACTACAACGCAGTAAACAGAGTAGTCGTCACAGTAAGGAGAAAGATCGCCAGTCACCTCTTCATGGC
AACCATATAACAATCAGTCACACTCAGGCTACTGGATCAAGGTCAGTTCCTATGCCACTGTCAAATATATCAGTG
CCAAAATCATCTGTTTCGCGTGTGCCCTGCAATGTAGAAGGAATAAGTCCTGAATTAGAAAAGGTATTCAATAA
GAAAATAATGGGAAGGAAGAAGTATCCAAGCCGTGGACATACCAGATGGTGAAGAGCTCCACTTCTGCTCAT
TACCGGAGCAGTAGTACTCGCAGCATTGACACTCAGACTCCTTCTGTCCAGGAGCGCAGCAGTAGCTGCAGCAGT
CATTACCCCTGTGTCTCCCTTTTTGTCCCCCGGAATCCCAGGATGGTAGCCCTTGCTCAACAGAAAGATTTGCTC
TATGATCGTGATAAAGACAGTGGGAGTAGCTCACCCTTACCCAAGTATGCTTCATCTCCCAAACCAACACAGC
TACATGTTCAAACGGGAGCCCCCAGAGGGATGTGAGCGAGTGAAGGTCTTTGAGGAAATGGCGTCTCGTCAGCCT
ATCTCGGCCCCCTCTCTTTTCATGTCTGACAAAAACAAGGTTAATTTTCATCCCAACCGGATCAGCTTTCTGTCT
GTAAACTTCTAGGCCCTCTTACCTGCTTCTGACCTTATGCTCAAGAACTCTCCTAACTCTGGCCAGAGCTCA
GCTTTGGCAACTCTGACCGTTGAGCAGCTCTCATCCCGGGTTTCCTTTACGTCCTTTCTGATGACACCAGCACA
GCGGGCTCCATGGAGGCTCTGTCCAGCAGCCATCCCAGCAGCAGCAGCTCCTGCAGGAAGTGCAGGGTGAGGAC
CACATCTCTGCTCAGAACTATGTGATCATCTAAAAAAGGGGAGCTGGCCTCCACCCTGTGTTCCATGGATTCCG
AACAAGATTTAGACATCTGCATGAGTGACAACTTCTGAACACCACCACCACCAATAACTTATCAGCATCA
TAAAGTATCTCTTAAACACTGATCTTGGCAGGGACGGAACCTCTATTAGCAGTTTTTGTGGAAGCAGTAATGC
TTGCAAAACGTGTGTGTCATTTCAGCATTTTAAGTGGAGACTATGCATTTTCATAGTATATTTGACAGATTAGTACT
GTGTCTGTGTTTTGTTCCAGATTCTTCAGTATAAATAAGTCTATATCAAAAAGTTGCCTGTCTAAATAGAAAA
TGCTTGTGTGTTTTGTCTATGGAAAATACTGTAATTCAGGATTATGTTTACAATTGATCCAGGTGTTTGT
CTAACTTCTGTAATACATACAATGCAAAAAAAAAAAAAAAAAATGGCCACAACAGTTGCACAGTGCCACCCTATG
GCCTAGCTTCAGGTACTTCAGTTGAAGTCTAAACTCAGGTAACCTGGAATGTATATCATATTGGGATATTAAATA
TTTCACAGCTAAAAAGCTAAAGAGGGAACATCACTCTTTGCCCTTCTTATTTTATGCATTTCCCTTTCTCAT
TACATTCCACATTCTTAGAATAAGAAGTGCATTCAATCCTAGGAGAAATGATAATCCTGGACATGGGTGAACATGA
GGAGAACCAGCAAAATCTGTGGTGTGTTGACATCACTTTGTCATGTGGTTACAAGTAAACAACACTGTTGCATTAC
TGTTTCAACATGTGTACATGTGGCTTTTTTAAAGTTCAGGTGTTGCTCAGTAAAGGACTGTGACAATGTTGCAA
ATAAAGTGTTCAGTACTGGACTGTACATAAACATTCCACATTGTGTGTGATGAAATTTAAAGACAAGAATGTCTA
GAGTTAATTTCAAATAAGTGAAGTGTGTTGACGGAATGGTTGAGATTTTTTGTGTTATGTTAGCCATCAGGGTCA
TAACTGTTACCATTTTATCTAAAGACATATTTATATTTAGTTTTCTCCCTTGGAATTTCTTTATTTTGCAGGTGAA
AAAGTGACATACTTTTGTATTGTCTTCTCAAGCAGTTTAGGTGCATGATCTTCATTTACATAGAATACTTGG
GTCTCAGAATTGATGCAACATAAGCAGGTTTTTTTGGTGACTTACAAGAGCAATAGTTTGAAGCTATCTCATTTA
AGCCTCTCATAATGCATAATCATGAGTAGTTTTGAAATTTGCAACCTGTGAGGTAGAGCATAAACTCAAGAAAAT
AGCCTTGAACCTGCAGACTTTTGACACAAGTTCTCCACAAAAGTGTGAAGAGAGCCCCAGGCATTCTGATTGGTC
AATGGGAGAGCCTAACTTTCAATTGTTTTCTTCAGTACAAAGAGTATCCAAAAGCTAAGTTTTTGTATTCCACTAC
TTTCAGTTCAATAAAACCTAGAGTTGTTTCATCTGCGCTAAAGTGTATGGCACAATTTTCTTAAGAATTAGGGG
AACCAGGTGCCCTACAGTTAAAGGAACGTTTCAGTTCCTTTTCATTCATTCTGCGTTTTCTTTTATTTTCTAAGA
AGGTTGAAGAAGGATGAGTGATAGAGAAGAAAGCAACACCATTGATTTTTTTTTTTAAGAAATGATATATATATG
TATATGTTTGNNNNNNNNNNNNNNNNNNNNNNAGTATTCTGTGCATTATTTTGTGATGATCTCAATTCTCTCTT
TCCACCAAAGTTTGTGTAATATTTTCTCCTGAAGGTGCATTCTGGCTCCTTTAAATTAGTCAGTGTTATATTGT
AGGAGACTGTATGGAAGAAAGGACTCAGTTTACTTTCTGTCATTTTCACAGGGGAACCTTTTAAACAATCTTTT
CAGCAGCAGATACCTTTAACCTAATAATCTCAGGCCCTGATGAAAATACTATATTTTGTAGATTATGGTTAAAG
GGGGAATTTACTAGTTCCGTAAGATAAATATGAGCTCCATTGACTTCTGATGTCTGGTTTAGCATTACATAAT
ATGTTGATCTTACACTCTGCTTTTGTCCAAATAAAATGCAATAGTATCAATATCAATTTAGAAAAATGGACTGA
ATATGCTTTTTTGGTGATGAAATCTCATGTACGATATTTATAGTGATGTGCTTTTATTTTCTCATGAGATACTAA
ATATTAATTGTGTTGTACATTGTTCTTAGCATATATTAAAGTTTTGAACCAATGTGTTAAAGCTTACGCTTTG

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FIGURE 1295B

CCATGTAAATTTCCCAGAAGTTGTTGAGCTCAAATGTATCCTACATCCAGCTGTAGAAATTTGTCAGAAATTGTT
TAAATTTTGTATATAATTGTACTGTTTAATTCTAGCCATTGCGCTGAACAGTATTTGAGTTACCATATAATATGG
CTTTACACAAGGAAATGTGTGGCTTTTGTTTTGTATTTTTCAGTATAGAAGTTCCTGTGTCTTATTTAAATAAA
GTTATTAGTAAAACTGAAAA

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FIGURE 1296

AAAAPAEQAPRAKGRPRRSPESHRRSSSPERRSPGSPVCRADKAKSQQVRTSSTIRRTSSLDTITGPYLTGQWPR
DPHVHYPSCMKDKATQTPSCWAEEGA EKRS HQRSASWGSADQLKEQIAKL RQQLQRSKQSSRHSKEKDRQSPLHG
NHITISHTQATGSRSVPMPLSNISVPKSSVSRVPCNVEGISPELEKVF IKENNGKEEVSKPLDIPDGRRAPLPAH
YRSSSTRSIDTQTPSVQERSSSCSSHSPCVSPFCPPESQDGSPCSTEDLLYDRDKDSGSSSP LPKYASSPKPNNS
YMFKREPPEGCERVKVFEEMASRQPI SAPLFSCPDKNKVNFIPTGSAFCPVKLLGP LLPASDLMLKNSPNSGQSS
ALATLTVEQLSSRVSFTSLSDDTSTAGSMEASVQQPSQQQQLLQELQGEDHISAQNYVII

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FIGURE 1297

GAGTAGCTCACCGTTACCCAAGTATGCTTCATCTCCCAAACCAAACAACAGCTACATGTTCAAACGGGAGCCCCC
AGAGGGATGTGAGCGAGTGAAGGTCTTTGAGGAAATGGCGTCTCGTCAGCCTATCTCGGCCCCCTCTCTTTTCATG
TCCTGACAAAAACAAGGTTAATTTTCATCCCAACCGGATCAGCTTTCTGTCCTGTAAAACTTCTAGGCCCCCTCTT
ACCTGCTTCTGACCTTATGCTCAAGAACTCTCCTAACTCTGGCCAGAGCTCAGCTTTGGCAACTCTGACCGTTGA
GCAGCTCTCATCCCGGGTTTCCTTTACGTCTCTTTCTGATGACACCAGCACAGCGGGCTCCATGGAGGCCTCTGT
CCAGCAGCCATCCCAGCAGCAGCAGCTCCTGCAGGAAGTGCAGGGTGAGGACCACATCTCTGCTCAGAACTATGT
GATCATCTAAAAAAGGGGGAGCTGGCCTCCACCCTATGTTCCATGGATTTCGGAACAAGATTTTCAGACATCTGCAT
GAGTGACAACTTTTCTGAACACCACCACCACCAATAATACTTATCAGCATCATAAAGTATCTCTTAAACACTGAT
CTTGGCAGGGACGGAAGTCTTATTCAGCAGTTTTTGTGGAAAGCAGTAATGCTTGCAAACGTGTGTGTCATTCA
GCATTTTAAAGTGGAGACTATGCATTTTCATAGTATATTTGACAGATTAGTACTGTGTCTGTGTTTTGTTCAGAT
TCTTCAGTATAAATAAGCTCTATATCAAAAAGTTGCCTGTCTAAATAGAAAATGTCTTGCTGTGTTTTGTCCTAT
GGAAAATACTGTAATTCAGGATTATGTTTACAATTGATCCAGGTGTTTGTTCCTAACTTCTGTAATACATACAAT
GCAAAAAAAAAAAAAAAAAA

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FIGURE 1298

CGGTGCTCGAGGCGGAGGGGAGGAGGCGGGGAAGGCGAAAGGAGGGGTTCGGAGGAGAGGGTTCGATCTCCGTAC
GCACCAGGTGGAGAGCGCGCGCCTGGGGAAGGAGGCGTGTGAGTAGCGGGAGGGAAGTTGTAGTACGGGTGGGG
AGAACCACACTAAAGGAGATGGGGGTGAGCAGTTAAGGAACCGCGAGAGCGCCAGGTAGAGAGCTGCCCTTAAT
GGGGGAACCTGGAGAAGAGTGTGAGCGTAGTGGGGAAGAAGGGAGAAAGACAAATAGGTTTCGGGAATGTGTCTCCG
AGGGCGCGAGCGGGCGCTAGGACCCGGCGTCTGAAAAGATGAGGCTTTGGGGCTGTGCGGGCGCGCGCTCCCGTTG
GTGACGCGGGGGTGGCGGAGGTCTCCGGCCGGGACGAAGCCCCGAGGGAGTGGATACTCGACAGCCTTCGGCCT
CCGCTCGCTTCTCCCTGCGCGCTTTCTGTCTCCCTTTCCGGCTACAGCCCTGGGGTTCGAGCTCTGGTCTGAAGCG
CATTCCGCCTCTCCTTTGGCCCTGCGGCTTCTTTGCAACCCGCCGCCACCCTTGCTCTCCGTGGTTTACCCCT
GGGCTCTGAGGCCTGGTGGTAGCGGCCACTGCCGCGGATTGGCTGTTGCGGACCCGGGGCGGGGCAGGTGGGAGA
GGCTCGTTCTCCGCGGGTTTCGTTGTGTTTCGCGCCATGTCGTTTGTGAGAGCGGGTGGCGGTTCGGCTCTGCGG
CGCCGCGGTCCCGGCACCCCGGGCCCTGTGGCTCGGCCATCGTATTCCTCCTTTACTCAGGGGGACAGCTGGGGT
GAAGGCGAAGTCGACGAGGAGGAGGGATGCGACCAAGTGGCCCCGCGACCTGCGGGCGGAGTTCTCGGCTGGGGCG
TGGTCAGAGCCCAGAAAGCGCTCGGTGCTCCCGCCGGACGGGAACGGGTGCGCCGTTCTGCCCGATAAGCGCAAT
GGTATCTTTCCCGCGGCCGCGGGCAGCAGAGCCAGCCTCGGCGGTGGCCGGTCCAGGTCTCTCTATTCTCTGC
TCGCTGCTCTTCGCCATTCTTCTCGCCTTCTCCTCGCCATCGCCTACTTGATCGTTAAAGAGTTGCATGCTGAG
AATTTGAAAAATGAAGATGATGTAGACACTGGACTATTAGGATTCTGGACTCTACTTATAATATCCCTAACTGCT
GGATTCTCCTGTTGCAGCTTTTCTTGGACAGTGACTTACTTTGATTCTTTTGAACCAGGAATGTTTCTCCTACT
CCTCTTTCACCTGCCAGGTTCAAGAACTGACTGGACATTCTTTCACATGGGCTATAGCGTGGCGATTTTGAAT
GGCATCGTAGCTGCTCTTACTGTAGCATGGTGCCTCATGTAAACCCACACTGGAGCGATATTGTTGGCAAAACTT
AATCATGATTGTTTTGTAATAACAAGAAGGAGCATCACTGTCTACTCAGAAGACTGAGAAACCTGCTGTTTATT
TGAGTTTCAGATATTTATCACAATCATCTCATTATGGAAGACCTTTTAAAGCATTGTTTTAGAATGTCTGAGTA
TTAAGATACAGATTAATTGGGAATATCTGAGTATTAAGTACTTTCTTCAGAGTATAAGATGTTTACCTCATCTTT
TTACTTTTGTGTGTGTAGTTCTTTCAAGTTGTAGGAAACATTTTAAATGGAATTTAAACTCAAAAACCTGAATACA
GGACAATGCTTGCCTTTTTCATGTATGTACTACATTTTTTGTCTAAGAAATACTGATATTTCTGTTTAGTTGAGCTA
GAAATACTTCTTATTTTATACATTTAGGAAAGCAAATAATGCCTACTACTCCGACTTTTATAGAAGCTACTTTTAA
ATCAGAATATTTAATTTTTGATATTCATATAATTAATAGAAGTTGCATTTATATTTTTTATGGGGCATAGTTCCCT
TATGTGTTTTTTTAAATGTATTTTCACTACTACATACTGAATTTGTATGTTTTTAAATTTGTTACATCTAGACAAC
GTAAACATTATTTTTTTAGCTAGTGCAAACCTAGTACCTGCCATTTTTACTAATTTTTGTCTTTAAAAAAGCAA
AAAAGCACATTGACCTAAGTTGAAAATTAAGTAAGTTTATTTTAAACAAAAATGCCTGAAAAAAGCTAAATTAT
TTAAGTCATTAAGATATTGAGAAAAAATTTGAAATTTTACTATCTCTGTTTCCACAATTCCAAATATTTATCTT
GGTGTATATATTGTTACTTTAACAGAACTTGCAATATTTGTTTTTAAATAATATAAACATGAAATTTTTGTATG
TGAGAATGATTGAACTAGTTTGTCTTAATCTCAAAAATTTAGTTACCAAAGTAGAAAAGGTATTTTGATACTAG
ATATTAAAACTACATATAGTTAATATAATTTTATAATTTTGTAAATTAATGTGCTTCTGTAATTGTGATATTT
TGTTTTCTAAGTAATTAAGCCTTAATTTTTCCCTATGTTACTAAAGACTTTTAAATGTTTAGAAAAGTTACCTCAG
TTTTAGAAAAGATGGACTACTTACAAAGCTGTTTTCCCTGGCCATAGGAAAACCTTACAATAAGAAACCATTAAAGTA
GTCAAACCTGCTTATTCAGGCTAAGTGGGAAATGAATTTGTGCAGTGTGTTCCCTTAATTATCTACTGAATGTTGT
TACCGACTAAACAAGGTTTCTAAAAGTCT

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FIGURE 1299

MSFAESGWRSALRRRGPGTPGPVARPSYSSFTQGDSWGEGEVDEEEGCDQVARDLRAEFSAGAWSEPRKRSLPP
DGNGSPVLPDKRNGIFPAAAGSRAQPRRWPVQVLSILCSLLFAILLAFLLAIAYLIVKELHAENLKNEDDVD TGL
LGFWTLLIISLTAGFSCCSFSWTVTYFDSFEPGMFPPTPLSPARFKKLTGHSFHMGYSAAILNGIVAALTVAWCL
M

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FIGURE 1300

AGTAACATGACTAAAAAGAAGCGGGAGAATCTGGGCGTCGCTCTAGAGATCGATGGGCTAGAGGAGAAGCTGTCC
CAGTGTCGGAGAGACCTGGAGGCCGTGAACTCCAGACTCCACAGCCGGGAGCTGAGCCCAGAGGCCAGGAGGTCC
CTGGAGAAGGAGAAAAACAGCCTAATGAACAAAGCCTCCAACCTACGAGAAGGAACTGAAAGTTTCTTCGGCAAGAG
AACCGGAAGAACATGCTGCTCTCTGTGGCCATCTTTATCCTCCTGACGCTCGTCTATGCCTACTGGACCATGTGA
GCCTGGCACTTCCCCACAACCAGCACAGGCTTCCACTTGGCCCCCTTGATCAGGATCAAGCAGGCACCTCAAGCCT
CAATAGGACCAAGGTGCTGGGGGTGTTCCCTCCCAACCTAGTGTTCAAGCATGGCTTCCTGGCGGCCCAGGCCTT
GCCTCCCTGGCCTGCTGGGGGGTTCCGGGTCTCCAGAAGGACATGGTGCTGGTCCCTCCCTTAGCCCAAGGGAGA
GGCAATAAAGAACACAAAGCTGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1301

GGGAGTTGCAGGGGAGAGATGGAAAGGCTAGCAGCTGAAAAAAATAGGTAAATAACCAGTGTATTCCATGTAG
CTGTTAATCTAGTTTGTGTGCTTCCATCAGCTGCAGGAGTATTCCATAGTATGCATCCACCATAGTAAATTTATCC
ATTCACCTGGTTGCCTCAAATTTCTTGGCTACCTGGAGAAATTAAAACCCCTGAAGCTAGGGTTCTGAGTACAAGA
TCAGTTCCACCAATTAGATTTCTTCATTTGAGATTTGGGAGGTAAAGGCTGTCTTTCTGCTGTTTGGGTTGTTC
TGCTGGAAAGCAAGTTTATGTACATATGGGGCTTTCTGCAACAGCTTTCCAGCTTTGAAAACCTGCNNNNNNNN
NN
AAAATAAATCTACTCTGTAATAGTATAAGTTTGACTACAATAAACTGTGGTTAAGAAGAAAAATTGGCCGGGCAT
GGTGGCTCATGCCTGCCTGTAANNN
NCCAGAGTAATGGTTTCTTGACTTTCTGTAGCCCTGTTCCTTAGTCTGCTGTGATATTTATGTTGACCTTTATC
ATTTTCTATTCTGAACCCCTCTTAGCATTTAATGTGAAATCTAAGAAATTAGAAGTAGAATGGCTTTTATTGTTT
TGACACCTTTGAAATTATTATTAATAATTTTCCAGAGCAAAAAGCAAACACGCTCAATAAGACTAAACAAAAC
AAAATATAAATGTACATCATTTAATGTCCAGTGGCTCTATTCTACCTGTAAGAAAATGATACAAAACCACCTAA
GATATTTTGAAGCCTGACAAATCAGCTTCATGGAAAAAGGTAAAAAATGCATTTTCAACCGAAAGGGCAGATCC
AATAGAAGACCCGCTCCTTAAATAAACATAAAATGTAAAAAGTTGGAATAAAGAGTAATGTTCCATCTGGAAA
CTGAACTTTTGTCTTGAACCTGTGTTGGCACCAAGCCTCATACACAGTGAGCTCAATAACTGTTGGGACAAAGG
AAGGAAGGACAAAATGTGTAACCTCCCAGCATCTGGGAGATGCTGTCTCTTGCCTCACTGAGTGTTCTTTCTT
TGCTCTCATGTCTATTCCCTGAGAACAATGAATTCTGGGACAGGCTAAACATCATGATGAAGTTTCTTAAACAGAC
TTTCTTAGTGGAATCCATTTAGATCTGGGTGTGCTCTATGGGGAGTGCTGACGTCAAAGAGCAAATGTCTATAA
GGGGCCCTTTTAAATGAACATTTTCTCATTGAGCAAGCTGGGATTCTCTAATGTAGAAATCAAGCCATCTTTA
TAATTTCACTTCAGATGTTTATGTTTTTGTTTTTTTTTGTCTCCAATGATGGTAAAAATAAAAACTACGCATTAC
TTAAAGGAGTTTCCCTCACATGTAAACACTGTTAGGAAGTCTGGATTAAGTTGAAAGTCTGTTTTAACTTTTTT
TCTCTCATATACCAAACACTCTGTATTTCTCTTAAAGAAGCCCTTTAAGAGAAAGCCCTAATTTTATATCTGACA
GTAAAGTTTGCTGCAAGTGTATGAGTTCAAAACATCCCTTGTTTTCTGTCCCTAGGGGAAAAGTCATGTAGTTT
TAGCTTGGCTCCAGTGTTAATATTATATTAGTAGCAGCCTTAGAAGAGTGGTCTAAGACTTGAACCTGGAGCAA
TTTTATAGCACAGAATCCTACGAAGATAGGACTGTGAACATTTGTTTTCTTTTTCTGTGTGTGTCAACTAACTGG
TTTTTGCTTTACCAATAAAATGTCCTCGGCAGAGTAAATTTTAAACGTGAAAATTATAGATCTTGATATTGAATC
CATCAGTGATTCAAGAGATACACCTATTTGCCTAAAACAACCTAAGATGTATTGGTTATGGAATCATGTGTTGGA
TAGGTTCTTAAGACCTGTTTCTCAATCTTGACACAGTTTTCAAGGGTGGCTTATTGACTTGCACGGTTGGGCA
GATAATCCAGATTTACCTAAGATTGGGTAAAAAAGTCATCTGTGACTTTGCTGGCAGGGCATTGCTAAGTGGAG
TACAGGATCTAAAAGGGTTTTCTTAGAAAGGGCAATATTGTCCAATGAAGTAAGCAGAAGGACTCTGGGTTAGAA
GCATCTGCACAAAACTGGTGAGACCTACTCTCCACTGCTCTGCAGCTGGATGGCTGATGGCAGGCTGAGCAGTG
GGGAAGCAGGTTTTAACAAACAGGGAGTCTTCCAGGTCACCTGTATATTGAGAAGAAACATAAACTATTGTCTGT
TACATTCCGAGGTCAGCCTTCTTCTTAACGTTTTATAATATGCAAATGCCAGCTTCTGGAAAGCAAGTATCATCA
TGTACCAAATGCTTTATACACCATCACATTCATGAATTTTTTAGCATGGTCAGAACTTGTGTAAATATGTCTCTT
AGATGATTTTGGGGAGATGTGATTTATTTTTTCATATTTTCAAAATGCATTTCAATTTCAAATAAAGTTATCTATTG
AGACAACCGAAAAAAGCGG

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FIGURE 1302

MILGRCDLFFIFSKCISFQIKLSIETTEKKKKS

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FIGURE 1303A

AAAATACTTTGCCAAATGAAATAGACTAGTCAATACATCTGATGTCCATAATTATTGGTAACTCAGTTACCTTCT
AACTAATAGGCTGGTTTCAGGAGACTCTCCAGTTTATAAATGGTTCTCTTGGGAGCCTTTGGAAGCTGTATTAA
TCTTTTCAGTCTTTTATTTCTAATTTTTTCTCTTAATCTAAATAGAGGCCAGTTATCTATTTTATCAGCTTTTATT
CTTGAAGATTCTCAGATTATGTTTTAGTCCCTTTTAGCTTTAATAGTCCTTGAAAAATACATTACTGTATAATGT
GGCAATTCTGTAAACAGAGACTTATTACTTTGAATGAATAATCCTAAAAATTTTAAATTTTTAGCTGAAGTTTGAGAT
TTGTGGAATGAACAAAAGAATTAGAAACTTTTCATATGTTACTTTGTTTCAGTCATCTGCAAAGTATGAAGCTGTA
ATTCTGAAATACACATCCAAGTGAATGAGAATTAATAATTTTCTAAATATTAATACTAACTGGGAAAAAAAAC
AGTGTGAAGTTTACAGTTAGAAGAAACAGACCCAAAGTTGCCAGAAGGTAATAATAAATGTAGTTTTCTACTGTA
AGTAAGTTATTGACGTAAGATGCTTTATTTGTAATATATTTAGATTTTGAAAGTTATTGAGAGATGAATGTATAA
AAGCTAAATTTTCTTTTCTGAAGCAGTGAAACAAAATTTGGGGTAAACAAGGAAGCTCTGTTGTGGCAACATGTCT
ATGAGGAATATTAAACTAAGCATACTCCACAGGCTTTAACTCAAACCATGAACATTTAAATTAAGTTGTTCC
TTATTTTGCCTATACCCATTTTTATCTTTTCATTGTCGTTTTTGCTTGACAGTATGGTGACAGAGTATTTTTATTT
GGAAAGTCCTCAGCAAGATGAATTAGCCAAAAGCAATAATGGTTTCAGATTAAACAATAAAGTGGAATTGATTCAA
TCCCAGGCTCAACTAAGAACAGTCGCTCTCTGGATGTTTCATTTTAGACGATAGATAAGTTGAGATGTTGTAATA
TTTATGGGGGGTTAAGCCTGTGTGCTAGTTATGGGATGAAGACTTGTAGTACCAGTACCATCAGTGGTCATACTTTT
TTTTAACTTTTTACTAACTAATACAGTTAGACATTTCCACTCTATCGTGATTATATTTTTATGATGGGAAAATA
AAAACACTTCCATGTTTTTATAAATAGTCTCTGCAAAGATTTTCAGATGTTATTGGTATCTCGGTTTGGCAGTATC
TGAAAAATTGAGATTGTCTTTGAAATGTTTGTGCTACTTTTACTTAAAGTAAACCCCCACTGTGCAAGACCCAGGC
CGGCTTCAGCTAATACCAAGGTTTCTGTGTGCATAATAGTTTACAGAGAACCTTAAGAGTAAGGACTGCGGATTAA
AAACAAAACTTTTTTTAACTTTAAATTTTTAGTTTTTGTTCAAAAGTACCTGGTTTTATAAAGTCAAATTCTTTTA
TTAGTTCCTTTCTCGTTTTAAATTGACTGATGTTGTGATGAAGCTTAAAGTCCCAGGCACGGTTGTGGCGATATA
CTGATAAAATTGGTGCCTAGTGGTGGGAGGAGCTCCAGTGTGACGACTTTTATTAAAGGCCCTTGTTTTCCCAA
ATGCCAATCTAGCCACATTTAGATTTTATTATTCAATAAAAACAGATGAAAAATCATCCATAAATGAATGTTGAG
GTTACCAAAGTACATCACCTGCTGAGGAAGGATAAATCTTCCTGCTTTAAGGGAGCCCTGTCTCTCTCTCTTA
ATGCACGTTTCCCTTGGTATTAGTGGAAGCTGTGTTCAAGATGGGAAGCCTTTCCTGCAGTTCTTAGAAACACCT
GCTTTCTAAGGAGAGCCTTTTCTAGGATTAGCTTATGTGTGTTTTCTCTAGGCGATTTTTTATTTTCAAGTTACCA
TTTAATTTTCAAGTTGACAGATGCTGTGTAAAGTCTCTCATAATGAGAGTAGTCCATTAAATTGTTGAAAGTTGC
ACTGCTTTTTCATCTTTTCAAGTACCTGAAATGAGTGACATCAGGTATTGGAAGGAGTAAGATCATAAACTGTATT
CATTTTCTTCTTGTACAAAGTGATGACTTCTAATGCTTATATCTCAAGGTATTTTTTAAAAAAGCAACGGTCCC
TAATAGAGTAAAAATTTGGTTTTGGTCCAAGTTCCCAATAATGTATTTAATGTTTCTGTTGTTTACTGGTGCCTCC
CGTTGCATCAGGTAGAGATTGCCTGCCTCTTTGTAGGGCAGCCTTGTGGCACCTTATGTCCAACCTTGGAGGATAG
TATATGGCTTCTTTGTGCCTCTACTATCTTTTCAAAGCCATTTTATAAAAAATCCTAGGTAGCCTATTTTAAATAT
TTAAATATATATATTTGTGAAAGAACTTTTAGAACAGACCTTTTCTTTTACTTTAAATTCCTGTATTTCCATT
TTTAAGAGTAAATTTAATCTCCAGGATTTAGAAGTGTCTTTCCAGAGAAGCATAATGAGAAAGTCAGACTGAGGT
AATAAGACCAGAATTAAGTGATAGAAGAACTGTTGTTTGGTTAAAGGACACAGATTTGAAGGAAAAAATTTTGA
TGTAACAATTTTTTAAATAAAATTTTGTTTTTCTGTAATGTCATATTTGCTGCTACAGTAGCTCAATATTTTACA
GGGCTAACATAAAGCTGGCTCCATTTAAAACTGGAGTACTTCCTAGTGCAGCCAGCCTAGGCGGAACTGTACA
CCATGGTCTTCCAGATGGGTGACTGATGGCTTTGGGTAGCTGATGCATGCTTTAATATTTGCCTATAGCCCGGCA
GCAAGGAAGTCGGGGCGGGGGGACTTTTTTACCCTGCCAGTTATAGCATTGTGATTCTTTCTGGGCACTGGCATT
TTGTGAAACTCTCAAGGGAAGGTGATGCAGGGGAGAAAATGTGAATTAATACATAGATGGGTGTTTTTATGTC
TTCTACCCCTTTCTAGAAATTAGTACAACCTCTTAAGTGTGCCAGTCCCCAGTTTACCAGCTTTGTATCCAGTCGT
CATCTCATTCAAGTATGGCTTTACTTGGTGACACTGGCCATAGCTAAGTTAACTTGGCATGTTTGACTTTTGACA
ATAACAAAAATGGTTTTGGATTTTGTTTTTATTTCCAAAAATGTATACAATATCAGAACTTCACATTTTATATAC
TAGTATCTGGCTATTAGTATTTTACAGGAACCATAGTTCTTGGTGACTACATATATATATATATTTTTGTGACCT
TTTTTGTAACATAAGTGCCGTTTCAACGTTACAATCATTTTTAGGGTTATTGTAATCAATGTGAATATCATGTTT
TTTCAAATCTGTTCTGAGCCTATAGTGTGTTGCTTTGTGAACATGTGTATTGTATATATCTGTATAGTTATATTG
TACTGAAATTAGCTTGTGTTGATATAAGGAAAATATGTATTGAGTACCTTTTTGCTAGCCTGATTGTTTAACTTTT
TTAAAAAAGGTTTTAAACTTTTTTTTAAAAAAAATCTTTAACTGGCCTTTATTACATGGTCACACATAAAGTTG

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FIGURE 1303B

CAGTTAGGAAAGGGATGGGCAGGGAAAACTAGTTTTGAGTGTCTTTAGATAGAAACATGAGACTAAGGTTTGAT
TTTGTTTTCGTTTTCTCATTAAAATATCTTATGCTTTATGGAATAAAAAAAAAACAAAGGG

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FIGURE 1304

MRLRFDFVFVFSKYLMLYGIKKQ

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FIGURE 1305

TTCCGGCCTTGTAATCGCCGAGGGCACGTGCATGCCCCCTGGTTAAGAGTTGCAGGTAGCGGTAGCGATGGACAC
TCTGGATCGAGTAGTAAAGCCCAAACGAAAAGAGCCAAGAGATTCCCTTGAGAAGAGAGAACCGAAACTCAATGA
AAATATTAAAAATGCCATGCTGATTAAAGGGGGAAATGCAAAATGCAACAGTGACAAAAGTACTTAAAGATGTGTA
TGCACTGAAAAAACCATACGGTGTACTATATAAAAAAGAAAAATATTACAAGACCTTTTGAGGATCAGACATCACT
GGAATTCTTTTCAAAGAAGTCAGATTGTTCTTTATTCATGTTTGGCTCCCATAATAAGAAGCGGCCAAATAATCT
AGTAATAGGTCGTATGTATGACTACCATGTGCTGGATATGATTGAATTAGGTATTGAGAATTTTGTCTCTCTAAA
AGACATTAAGAACAGTAAATGTCCTGAGGGAACAAAACCCATGCTGATATTTGCTGGCGATGATTTTCGATGTAAC
AGAAGATTATAGAAGACTAAAAAGTCTTCTTATTGATTTCCTTCAGAGGCCCCACAGTATCAAATATCCGCCTGGC
TGGATTAGAGTATGTTCTGCACTTCACTGCACTGAATGGGAAGATTTACTTTCGAAGCTATAAGTTGCTGTTGAA
GAAATCTGGTTGCAGAACACCACGGATTGAATTGGAAGAGATGGGACCCTCATTGGATCTGGTTCTGAGGAGGAC
ACACCTGGCATCGGATGACCTTTATAAATTATCTATGAAAATGCCAAAAGCTCTCAAGCCAAAAAAAAAAAAAAAAA

A

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FIGURE 1306

MDTLDRVVKPKTKRAKRFLEKREPKLNENIKNAMLIKGGNANATVTKVLKDVYALKKPYGVLYKKKNITRPFEDQ
TSLEFFSKKSDCSLFMFGSHNKKRPNNLVIGRMYDYHVLDMIELGIENFVSLKDIKNSKCPEGTKPMLIFAGDDF
DVTEDYRRLKSLLIDFFRGPTVSNIRLAGLEYVLHFTALNGKIYFRSYKLLLKKSGCRTPRIELEEMGPSLDLVL
RRTHLASDDLYKLSMKMPKALKPKKKKK

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FIGURE 1307A

CAACAACAAAAGGACTTGGACTGGCCGGCCTGGGCGCACGACCCGAGGGCTGGAGTCGGCCCCGCGCCTGCCGTC
TGGGTACCTGAACGAGGTGCAGCGCAGCCGGCCCCACCGCAGCTACCTCAGCAGTCCC GCCCCGCCCCGCGTCCTT
CCCCGCCGAGCCGGCCTCGCTCCCTTCCCCGCGCACCCCGCACGGCCCGGGCCACGTACAATGACTCTTCTTGC
TTTTACCTAAGTTGAATAAGCACCCCTGTGCACTTTAATCTCCTGTGCGTACCATTGGGCCAACTAAAGACAAGG
TTTTGAAATCTCAGCTATAAAAGACATCCAGCCAACTCTCAGTCTTGCCTTAACAATGTTCCAGAGGCTGAATA
AAATGTTTGTGGGTGAAGTCAGTTCTTCTCCAACCAAGAACCAGAATTCAATGAGAAAGAAGATGATGAATGGA
TTCTTGTGACTTCATAGATACTTGCACTGGTTTCTCAGCAGAAGAAGAAGAAGAGGAGGACATCAGTGAAG
AGTCACCTACTGAGCACCCCTTCAGTCTTTCTGTTTACCGGCATCTCTTGAGTGCTTGGCTGATACAAGTGATT
CCTGCTTTCTCCAGTTTGAGTCATGTCCAATGGAGGAGAGCTGGTTTATCACCCACCCCATGTTTTACTGCGAG
GTGGATTAACCACTATCAAGGTGGAACAAGTCCTATGGAACCTTCTCATTGAACATCCCAGCATGTCTGTCT
ATGCTGTGCATAACTCCTGCCCTGGTCTCAGTGAGGCCACCCGTGGGACTGATGAATTACATAGCCCAAGTAGTC
CCAGAGTGGAAGCTCAAAATGAAATGGGGCAGCATATTCATTGTTATGTTGCAGCTCTTGCTGCTCATAACAATT
TTCTGGAACAACCCAAGAGCTTTGCGCCCTCCCACTGGGATAAAAGAACACAGTGAAAGACAGCCTCTTAACAGAA
ATAGCCTTCGTCGCCAAAATCTTACCAGGGATTGCCACCCCTCGGCAAGTCAAGCACAAATGGCTGGGTTGTTTCATC
AGCCCTGCCCGCGTCAGTACAATTACTAATAGTTTTCAAGTTTTGTTGGTTGGTTTTCTCTTGGTTTTGTGCTTACAT
GTATGGATGTGTGTATATGTACAGTGAAAATGTTGTCTCTTTACAACCAATTGATAACCAATCACATAGTTTTAT
CAGTGTATTTAGACACTATCTTGAAAATCAGATTTATATGCTGTGTATCACATAATGCCTTGCCTTAACATTTA
CTTTTTTTGTACACTTTTTTCAGATTATTTCTGGAAACATATCAATATAATTACAGTGTTTTGGGGGTGTCTTTAAA
TATATTAGGTTATACATTAGTCAGCATTTTAAAGACATTTCTTCCCAAGTACGAGAATAGGCATCTTTCAATTTT
ATTTTATTTTGTATTACTTAACTTTTTAAGCAAGCAAAAATTTATTCTCAGGGTCAGCTGTACACTTTATTGACC
AGTACTTGATAATCTCTCTGTATATGATGAATACATTTTTTACACACTAACATTAGCATTAAACAGGTGATAGTTGC
CATGGATATAATGGAATTATGGCTGGACTTTCTTTTGAAAGAAAACCTTGATGTATTCTGTGTGTATGGTTTTTCC
CCAGATTAGTCATACAGTTTCATTTGGAATTCAGGTACATTAAGCTTTAGTGAAGAGTGCATGCAGTAATTCCAAT
GTGACTGCATGACGTGGTACAGACATTACAGGTGTTGTAGACAGAGGCACTTGTCTCGTGCAGAGGGATTAAAT
AGACCTGTGAGATTATATTTGGA AAAAATTCATGTCTGTAACTAACCCATTAGTGCAGTATTTAATTTGTTACTAT
TCCTTCCCGCCAATTCGTCTCACTCCTCACCTCGCATCAGCTATAAATTTGGAAGTACTTGTCCAGGCACTCAAG
TGACTTCATATTTCTCTCTGCCCATGGGAAAAGAGATAGGCTTTATATTTCCACAGAGTGAAAAATCCTCTGTCA
TGGAGCCTGTCTGCAAGTGGCAAGAGTGTGGGGACTGTCTGGTGATGATGTCTTTCATGGCATCTGAGTGAAG
AGTGACAGGTTGGCTCAACTTTTTTCTTTTTTTTTTTAATTGCCTTGATTGTAAGTATTCTTCCCTGCAGTC
CAAGTGACTTTTTCAATTTTTTGTTTTAACTTCAGGCAAAATCTTTAACCCTCTGGCCTCTGTTTTCCCCACCAAC
GGGGAGCAGTGACATTTACCTCCCTCACAGAGTCACTGTGAGGATTCTATACTGATTTGAAGTGGAGCTGTTTCAG
AACTGAACCTTGTTAGGAAATTCGAAGGGCCTTTCTACTGAATCTGGTGATGGGGTGGGGCCGTGGCACTTTCTCT
GCCACAGCTGTTCTTCACAGTGTTGGTGCTAATGAGGCCAGGGTGCAGGGTTCGATTACACAGTAGGCCAGTTAA
CTTAGAGAAAATCTATTTCTTACCTCTAGCCAGTCACTTCCTTTTTCCGCAGTTGTGATGGGTTTTGCTGAGCC
ATCCACTCTGACTGATTTCTCTGAAGTAAACATATTTACAATCCAAAGCAATTCCTACTGACAGAAGTGTTGCCCT
TCATAATCAAACAGCTTGTTTTTCCATCTCCTCTGCAACCCTAATTAATGAGTACAGGTCTACAAAATGTTTTT
AAGGAGAAAAGCAGCATATCCTTAAGTGAAGTATTATATTTTTCAATAACCCTGTAGTGGCTTGATGCAGGGAAC
CCTGGGGGACTTTCAGCGAAGAGCTGTGCTCTTTCTGACTAGATTAGAGCGTTTGGAGTGAAGACGTCAAATG
TGATGTGAGATGGAGTTTTACATTGTTCTTCTACTGGCTGTGATGAAGTGCCAGAATGTCTCTTTAGAACAAGA
GTTAGATTCCCCCTTTCTCCTTATTGCCCTTCCGTTTTGACTTCCCTTTATTTATTTGTTGTCTAATTAGGGG
CCAAGTCTGTAAAGTTTTGTCAAAGTGAGTTAGAAGTTGTTTTCTTACTATTTGTGTTTACCAGAGTTGGGAG
ATAAGATAGTTTCCATGAAGGTGTGTATGTTTTATACGATGTTGTTATAGGGCCATGCATTGGTAACTTGAAAA
TAGACCAGCTTAATGTCTTCAGGATGTAAACTCTGAATACACGGCGTCTCTTTTTTCATACATTGCATGTAAGTT
GTTAGTACCTCACAAGCTACAGAAGTTCAGCCATGAGATTTTGTGTTGGCAACATGAACAGATTTGTGTATAACTG
CAATGGCCTTTTTTCCAGATTTCTTATTGACTTTTTGTTTGCCTTACCTGGGGCTAGTTTTTTATGCTTTGTA
CCTAGAAAACAAAAAATTACATTCGTTGGGCTTTTTTCAAGGTTGGGATTACCACACCACCTGGAATATCATAC
TGTGGTTTTCTGCCTAAAATTGGCACATGTAAGTATTGAAGAAAATGGTTATATAATTCAGTTGAAACTCTTGGTT
ATTAGATGTTAGGCATCTCCTGTATGTAAGACACAAGGCCAACCACAACACAGAACGATGTTGACCTGTTAAGTA

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FIGURE 1307B

TTCTCTGAAACATGGCCAAAATGCATTTTATGAGCTTTTTTTTTTGCTATTGTAAATATTAGTGGTTTACAATGC
GCTTTAGACATATTTCTTTAAAATGCAAGCAGTGAGAAATAAGACCTCTCTGAATTAGTAGCTCTAAACTGTTAA
CATAGAATGTTACTTGGAAAAAGTCTGGAATATGTGGTGTACACAAGCAGTGCTTCGTGAATGAGTTTCTTAGCT
TTTATAGTGCGCCATGTTTCTCAAAGTTTGTTTTTGTGACAAAACATTTTATAATATATATCTTATGTTTATTT
TTTTTCTCAACTAATTGTGTACTGCACTGTAAGGTGAAAATTAGCCATCCATTATTTATCTTCTGTGGCAATGCA
TTTATATGGTTGATTGGGTGGGGAATTTTTTGCAGAAAGATGCAAAGTGATTGGGTTTTCGACTTCCTATCGCAG
GGAGCTTTTAAGAAATATTAATTTTCTATACATTTTTCCAATCCCCATGCAAAGTGTTCCTGTTTACATACCTTC
TCTGTTGTATCAGTACTTTGAGTGAGAAGACAGTTTATTTAAACTTGAGCAGGCTGTTTACGCAATTGTTTCTGCT
TCTGAAATCTGTATAGTACACTGGTTTGTAAATCATTATGTCTTCATTGAAATCCTTGCTACTTCTCTTCTCCTC
AATGAAATACATTATATATTATCTTTATGTACTCTTAAGAAAACGAGCAAGGAAGAGTATCTTCATTATTCTCA
TTTTCTCTGAGTTGGAAACAAAACATGAAGGACTCCAAGTAGAAGACAGATATTTACATTTAAATAGATTAGTG
GGAAAACTTTAAGAGTTTCCACATATTAGTTTTCATTTTTTGTAGTCAAGAGACTGCTCCTTGTACTGGGAGACAC
TAGTAGTATATGTTTGTAAATGTTACTTTAAAATTATCTTTTTATTTTATAAGGCCCATAAATACTGGTTAAACTC
TGTTAAAAGTGGGCCTTCTATCTTGGATGGTTTCACTGCCATCAGCCATGCTGATATATTAGAAATGGCATCCCT
ATCTACTTACTTTAATGCTTAAAATTATACATAAAATGCTTTATTTAGAAAACCTACATGATACAGTGGTGTGAG
CCTTGCCATGTATCAGTTTCACTTGAAATTTGAGACCAATTAAATTTCAACTGTTTAGGGTGGAGAAAGAGGTAC
TGGAACATGCAGATGAGGATATCTTTATGTGCAACAGTATCCTTTGCATGGGAGGAGAGTTACTCTTGAAAG
GCAGGCAGCTTAAGTGGACAATGTTTGTATATAGTTGAGAATTTTACGACACTTTTAAAAATTGTGTAATTGTT
AAATGTCAGTTTTGCTCTGTTTTGCCTGAAAGTTTAGTATTTGTTTTCTAGGTGGACCTCTGAAAACCAAACCA
GTACCTGGGGAGGTTAGATGTGTGTTTTCAGGCTTGGAGTGTATGAGTGGTTTTGCTTGTATTTTCTCCAGAGAT
TTTGAACTTTAATAATTGCGTGTGTGTTTTTTTTTTTTTTTAAAGTGGCTTTGTTTTTTTTCTCAAGTAAATTTGT
GAACATATTTCTTTATAGGGGCAGGGCATGAGTTAGGGAGACTGAAGAGTATTGTAGACTGTACATGTGCCTTC
TTAATGTGTTTCTCGACACATTTTTTTTTCAGTAACTTGAAAATTCAAAGGGACATTTGGTTAGGTTACTGTACA
TCAATCTATGCATAAATGGCAGCTTGTTTTCTTGAGCCACGGTCTAAATTTTGTTTTTATAGAAATTTTTTATAC
TGATTGGTTTCATAGATGGTCAGTTTTGTACACAGACTGAACAATACAGCACTTTGCCAAAAATGAGTGTAGCATT
GTTTAAACATTGTGTGTTAACACCTGTTCTTTGTAATTGGGTTGTGGTGCATTTTGCACTACCTGGAGTTACAGT
TTTCAATCTGTCAGTAAATAAAGTGTCTTTAACTTC

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FIGURE 1308

MFQRLNKM FVGEVSSSSNQEPFNEKEDDEWILVDFIDTCTGFSAAAAAEEEDISEESPTEHPSVFSCLPASLEC
LADTSDSCFLQFESCPMEESWFI TPPPCFTAGGLTTIKVETSPMENLLIEHPSMSVYAVHNSCPGLSEATRGTDE
LHSPSSPRVEAQNEMGQHIHCYVAALAAHTTFLEQPKSFRPSQWIKHSEHQPLNRNSLRRQNLTRDCHPRQVKH
NGWVVHQPCPRQYNY

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FIGURE 1309A

CAACTTGGGTGAACAGCCAACATAAATGCAGTCCTGAAGAAGATGAGGAGGACGAGGAGGATGTTGATGATGAGGA
CCATGATGAAGGATTTCGGCAGTGAGCATGAACTGTCTGAAAATGAGGAGGAGGAAGAAGTGAAGAGGATTATGA
AGATGACAAGGATGATGATATTAGTGATACTTTCTCTGAACCAGGCTATGAAAATGATTCTGTAGAAGACCTGAA
GGAGGTGACTTCAATATCTTCACGGAAGAGAGGTAAAAGAAGATACTTCTGGGAGTATAGTGAACAACTTACACC
ATCACAGCAAGAGAGGATGCTGAGACCATCTGAGTGAACCGAGATACTTTGCCAAGTAATATGTATCAGAAAAA
TGGCTTACATCATGGAATAATATGCAGTAAAGAAGTCACGGAGAAGTATGATGAGAAGACCTGACTCCAAATCTTAA
AAACTCCTCCAGATAGGCAATGAACCTCGGAAACTGAATAAGGTGATTAGTGACCTGACTCCAGTCAGTGAGCT
TCCCTTAACAGCCCGACCAAGGTCAAGGAAGGAAAAAATAAGCTGGCTTCCAGAGCTTGTGGTTAAAGAAGAA
AGCCCAGTATGAAGCTAATAAAGTGAAATTATGGGGCCTCAACACAGAATATGATAATTTATTGTTTGTAAATCAA
CTCCATCAAGCAAGAGATTGTAAACCGGGTACAGAATCCAAGAGATGAGAGAGGACCAACATGGGGCAGAAAGCT
TGAAATCCTCATTAAAGATACTCTCGGTCTACCAGTTGCTGGGCAAACCTCAGAATTTGTTAACCAAGTGTTAGA
GAAGACTGCAGAAGGGAATCCCACTGGAGGCCTTGTAAGGATACCAACATCAAAGGTGTAATCAGCCTC
ATTGGACCACCTGGTCAGAAATGTCTGCGTTTTGTACGTTATCCATTGTAAATTTTCTATTCTGTTTTGCATGTCA
GTTAGCATTATGTAAACATTTACAATTAGGTTACATTGTTTTAAGAACTAAGTAGCATAAGTGAAGCATGATCCA
AAATACTTGATTATTGCATTTTTCAGAGCATAAAACCATGATTAAACTGCTACTGGCATCAGAATTGAAATCATA
TGTTAAGTAAATGTTAGGTACAGATTACAAAAATCTGTTAAAGCAAACATTTTGGAGGAGTGAAATAGTAAAA
TGCCAAGTATTGTGGCAGATTTATGCTCTGAACCACACAAAAAATTGAGGAAGCATTTTTTTTAAACAGTCGGTT
TAAATTGTTTTTAGAATTATTGCTTTTTTGTCTAATTTTCCACAACCATTAACTCTCACTTGTATATGGCACACCC
AGCACTTGTGCCTGTGGGCCATATTAGATGTTTATTGTCTAGAGCTCAAGATGNNNNNNNNNNNNNNNNNNNNNN
NN
TGGGGAAACTCTAAACTGGTAATATTTTGTATGATGAAAACCTTAATGAGAAAAACAAGATATATAGATGGAA
AAATTATGGGGTTTTAAATGTTTTTTTGTCTCAACTCTTTTTTCAGATTTTTTGAATGTATATAGGACTATGTTGAA
ATGTAGATATATGCCACAGAGTCTGTGATTGTATAAAAAACAAAAACAAAAACAAAAAAGATGGCTCTA
GAAAACCTCATATTTCCGTACTTGACCGGAAGAAGACAAATACTTGCACATTATTGCGATTGTTTTATTTTTTGTA
CCAAAGACAAATGCAACTGATATGGCAAACCTGCCAGTCTAAGTAAAGTTTGCACAGCTTACATGATACTGTATG
AATGTATGAAAAAAGGAGAAAAAAGAAAAAAGGTCAGGGTTAGGGATCTTACTGAAGTGTGAATTTTA
TTTCTGTTTGGGTCCAATTATCTACAGAAGGAGCATCCATACATAAAATATTATTTTGTCTTCTCTAGTTTCG
CTTCCATAGTAGATAAGTTGGTGGCCATTTAGATGTCTTTTATTTCTGCACTTATTGTAGGAAATTTTAATATAT
TTCATTTTAGTAAGCTATTGATAAAATAGTTTTTGTACTTTGAAAATTAATAATGTTTATTTAGCTTATTGTAGTAT
ACTTCCACCAGACAACAAATAGATTATTTTTATTGTATTATGTATATATATATATGTAAAGAAAGAAAAAGCT
AAAAATATCTAATTCCTTAGTTGCCACTTTTCCAATTGATGTATTATTGTGCATGTAATTTTTCAAAGATCAAC
ACAGGCTAAAAACAAACAAATTTATAGATTTTATATTTTGTACAGGTATTTTCAAACCTAGCTTCTTCAAACCT
AACATGTGACTTATTCTCTATAGTTTCTAGAATTGAGAAACATTAACACATTTAGTTTTTAGGTGCTCTTTTTT
GCTCATATAAAACAGCTTCATTAGTCAGTGTTTTAACTGTGTTCAAGCTTTACCTCTTGATGAGAAATTTCTTAT
GTCAAGGCAGCATTATAAACCTTCCCCACAGATTTTCCATCCTGTCTCTTACTGTTTTATTCTCAAATCTT
GTGCTTTGAACTCTGAAAACCTGGTGGCTTAAAACTAAAAAAGAAAAAAGCATATTTAGCAAGGAAAAAATA
CCAAAATTTTCAGGCATAGCTGCTGGAAAAATTATCTATTTCTCCATTACCCACTGTAGGATTTCTTTTTTAATT
ATACTTTGACTATAAAGTGTCAAAGTATAATTTGTTCTTTTCTTTTACTTTGTTACCCCATTTGTAAGCTATAGC
ATATGAAGCTATATATATAGCTTGTGAAGGTTTGATCTAGAACACCCAGTAACAAATGAACAATGTTGCTTACCT
GCTTCTTTGACATCTTAAAAAGAAATCCAAGGAGGATTGTAAGGATTGTCTTACCACCTTAGCTGAACTGTGAT
GCACAAGATTTTTCTATGTGTTTGGTGGAAATGTACCTGGTTTGTACATTACGCTAAACAGATGATAAGCTCAA
GTCTGATGGTTTTAATAGAATGTAAGTTTCATCGTTTTAAAGCTTTTCTTTTTTAGGTTGGAGAAGGCAAAACACAGG
CTTGCAAGTTGGAAGTATATGAAGTCTTGACAGAGTGTGTCTGGTAAATTGAAAAGTGTTTCAAACCTATGGCAGT
TTTGCAATCAGGTGAAAATCACCTCATGATATTCAGCTGATAAGGTTTATAAAATTGCCCTTTCTAGCTGCTCT
GTTAGGAATCTGGTTTTTGTACTTTTTTCTGTCTGCAAACCAGAATTTGATTTTTTGGTCTTGCAATTTCAA
AAAAAAGACTTTGAATCTGTTTAGTAGATTCCATATCTTTGAGTTTCAGTGTTTTATATGTACTACTTAAGTT
AAATAGTTAAAGCTTTTAAATAGTTGAGCTTTTTAATGTTGACACTTTATTTTGTACCTATTTATATATGTATG
TATATCTTAGAAAAGCACTTTGTAAAAAAAATGCAATTTATATGATTCCTGCCATTTGCTGCTAAATCTGGG

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FIGURE 1309B

CTGGTCAGAATGCTGCAGCGATACTTGATCTATATAAAAAACCTGGCAGTAAAATGTAGAGTGAAAAGTTAAATCCT
CTTGCTGTTTTAACTTTATCATAAAGATGACATAGGCAAGCTGTGCAGCTTTACATTTTAACCAGGGGACTCTGT
GGCATTAAAAACCGTCTAGAAATGGTTGTACTTTAATGCCAGTAATAATCTGCTTCCTCTATTGTTCATTAAAAATA
TATACGTTTAGTGTATCACACAAACCAATCTTATAAGGGTAATGTAAAAACCCCAACAATTGTACATGTTCTGTT
TTTGAAAATTGTGGCATGTATTTTTGGGTGAAGATCATTAGAGAAGAGTTCTCTAAAGGTTTTCTGTGTTTCATAC
ATGGTATACAGATAGCTCATAATGAAGTCCAGAATCTTACTTTTAAGTGAAGGCATTGTGAATTCACCTCAAGTA
AACCATTGTTCCAAAGCAATTATAAACTTTGACTCTAGTACTACTATGATTTAAAAAAAACCAACAAAAACC
TTTTTTCCTAGTTTCAGATACACTGGATTCTTTATAGAGTTTGTCTCCATATGAAAGCATGCTGTCCAGTCGCTC
TTGTTAAGATCTTGTCTGAGTTTTGAATTGGGTGCCACACTTTTCCAGTCAATATAATTGCTTGTCTACTGTAC
CATGTATGATTCTTGTCTTTTCCATATCCTTCATGACAGATTATGATGTGGCTTTATATTGTGCCTTACTTGTA
CATTTAAACTAAACGTCTTCATTCCCTTCCACTTCCTACATCTTTAACTTTGACCTTTTTGGTAAGAGAATCAG
AACTATTACAAAAGCATCATGAAGGATTCAGATGGGTATGGTTTCAAATTCCCTCTCTTTATAGTTATTTTATA
TTTGTATGAAAGACCAGTTTTGGATGGTCTTTGAATATAGGGGGGAAAGATTAGCAGTAATTTCACTACATCCCT
TTTCTCTGACTTTTCATGCATTTCTCATACATCTTCTTCTGATGCTTGACTTTATTTGCTTCCTAGCAATAGTCT
GCATTTAAAGAAAGGTGTGTTCAATTCATCAGCTTGAAATTGACTATTTTCCAGGATTTTTTAGGAGAA
GAGTACCCATTTTGTTTTATAAAAAACAGATGACAAGTCTCTTTAAAGAAACAGAAGTACAGTACTTTTGAAATA
CAATGCTGTTAGTTTGGATTTCTTTTATATATATATATAATATTCATACAATGATCTGATGTTTGCCTTCATTA
ATAAGCTGTTAGTTTATTCACCAAAATGTCAAGAATGGATGTGCTTTTCTTATTCCACACATTTAAAAAAATT
TAGCTGCTAAGATTTAATGTTATAAGAAATGAATTCAGTTGCCTTCAGCAAGAATTAACAAAAACTTATGTTCC
CTTCTTTTATATAGTTTCTTAAATTTCTGTTCAAGTATTTTCTAGTTAATTATGTAACAGAATGTTAGCATCTCT
CCATATCTTGAAACTTGAATTTTGAGAATGCATTGAATTATGCTTTCAGTGTTAAAGTAAAAGGTTTCAATTATC
CTTCTAGTGAAGTCTGTTGTGGAATACCATTTCCTAGGAACTGAGGCCATTTCCACAACCTTTCACAGAACTGC
AGTCTTGTCTTCCCTTGGATCATGACAAATAAGTCTCACACAGTGCCGTAATACTTGTGGATTCTTTTGTAAATC
TTTGTAACTTAAATAAGGGCATTATGAGAAGACGACTCCATGTTTTTTTTAATACTTCAAACACATTGGGATGTAA
CAATGAATGTCAACTGTAGGAATGGTGGTTTCGTTTTAAGGAATAAGCATGTTGGGGAAAGATGATGAAAATGTA
CTACTGAAAGTTATACACTTCCATAGGCAAATGGGATTATGTGTTGAAGCATAGTCCTCATGCTTAATAAACTGA
CTGAAATCGTAGAAATTACACCTAGGAACTGAGCTAGGCCAAATTGCCATTTTTGTTTAGAGAGTTTGGAGGTA
GTAGTGAGGGGACAGAGCCTTAAAACTACTTCCAAACAGTATTTTGGAAATTGAAGACTTGGTAACTAGTGAAGAA
CATCAAAGTTGGGTATTTCAATGTGCCAAGTTTGGGTGAACTAGGTTTCGGTTTGCCTCTTTCATAACAATGTAAA
CACAATGGTGTAGTTAATTAAATTCTGGGTGGATAGGAGCAGGACTGATTACTATGTCTTGCCCTTCGCCCTTG
TTTTTTTCAGAACCAATAACAGAAATGTGTATGTGTACTGTATCTGCCTTTCACCACATTTTATGACACT
GTATTCCACTGCCTGCTTTTTTACCTTCTTCCCTAGGATTTGTCCTACAGCTTAGTATTGTGGTTGACAGCGAT
ACTAGGGCTGACAGCACAGAAGTCACAAGAGAAGAGTGGAAGGGCAAGAATCAAAGCATTGTTCATACAATGT
GGCAACCTCTTTTGCATAGTTGCGTAGGATCCTGTTTGTAAATGCTATCATAAATATTCTGTAGTTTTTTTTTTT
CTCTCCCAACTGGAGCTATGACACTTTTATTGGATTCAGTCTTGTCTCTGTCTAGAAAGAACTTTATCTTGTT
GACGCATGAGCTGTTTAAAAATTATCCTATTAAATGTTGGTTAATAGTTGTGCAGTTTTTCATTTTCAGATGGAAA
GGCAATGCAATTTTGCCTTTGTTTTCTGTACCTTCCAACCCCTGAGCACTTCTAGTCAGATACAGATTCATCA
GTGTATGCAACATCCTTTGTAATTTAAAAATAAAAAAAGATGAAAAGAAAACGTTCTGAATTGTTTGCCTCATGTT
TTCGCCCTTCTTCTGTACTTATATCTTGCTTACCTAGGTAACCATCCGCTCCTCAAGATAACCTATTCCAAAG
AAATTCCAAATCACAGAG

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FIGURE 1310

NLGEQPTKCSPEEDEDEEDVDDEDHDEGFGSEHELSENEEEEEVEEDYEDDKDDDISDTFSEPGYENDSVEDLK
EVTSSSRKRGKRRYFWEYSEQLTPSQQERMLRPSEWNRDTLPSNMYQKNGLHHGKYAVKKSRRTDVEDLTPNPK
KLLQIGNELRKLNKVISDLTPVSELPLTARPRSRKEKNKLASRACRLKKKAQYEANKVKLWGLNTEYDNLLFVIN
SIKQEIVNRVQNPRDERGPNMGQKLEILIKDTLGLPVAGQTSEFVNQVLEKTAEGNPTGGLVGLRIPTSKV

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FIGURE 1311

GGCACGAGGCTGGAACCAAACAGTTTGGCATGTGTGTCAGTGATACACAAAATAGTTTTGCAGATTATGGTTGTA
TGTTACAAATTAGAAACGTGCATTTCTTACCGGACGGAAGGTCTGTGGTTGATACAGTTGGAGGAAAGCGGTTTA
GGGTTTTAAAAAGAGGAATGAAAGATGGATATTGCACTGCCGACATTGAATATCTGGAAGATGTTAAGGTTGAGA
ATGAAGATGAGATTAAGAATCTCAGAGAGCTTCATGATTGGTTTACTCTCAAGCCTGCAGCTGGTTTCAGAATT
TAAGAGACAGATTTTGAAGCCAAATTCTTCAGCATTTCCGATCAATGCCCGAGAGGGAGGAAAACCTTCAGGCAG
CCCCTAATGGACCTGCATGGTGTGGTGGCTTCTTGCACTTCTCCCTGTAGACCCACGATACCAGCTGTGCGTTT
TGTCATGAAGTCTTTGAAAGAACGGTTGACCAAGATACAGCATATACTGACCTATTTTTCTAGAGACCAATCTA
AGTAACTAACTCTTTGGATCTCCCTTTAAAGTGACCCTAATCTGGCTGCATTGATGGCCAGATTGTCTGCTGCCT
TTGCACATCTAGTGCTGGTTTTAGAAATTTAATGAACTTTTTCTTTTCTTCGACCTCCTGAATCATGTGGTTC
TGCAAATGAATACCTTCAACTAGGATTTAGACCACTAAGAAGTTGCACAGAAAAACACGCATTGAATGTGTGTCG
AACCTCTACATTGTGAAGTTGCACTATGTACCATACTCTAAAATGAAATAAGAAGTCTTTATGTCTGTGAGAGAG
TGTGTGTGTGTGTGTGCGTGCGTGTGTGCTTGTGGGGGTTGGGTAGTGTGTGTGTATTTTCTCTGGCTTTAAAT
CTTAAACAAACAAACAAAAAGCCATAGAGAGCAGAACTTGCCGAGGGTCATTTATTGCCCAAGTTTACAAGAG
TAGCGATACAAGTTTTTCAAATTGAATTTGCCTCAGATATATCTGTCCTAATGCTTATATTTGCACAAGTATGT
AAAATATCGTGTTGAGGATCATTCTTTGTTGAAATACTGCTCTTGCTGAACTGTCTTGACCATTGACTATGACA
CAGTTTCTTATTTATGTAAATACTTGATCAGTGCCGACAGGCATTGGATGCAGAACCTAGAGCCAGTTTTTC
AGGAACAATTGTAAACCTGACATGGTACTGTGCATCTATTCTAAAACACTCAAACTGTGAAAATATGGTTTAC
ATTTAATTGTACATAAAGGTAAAGGGAGAACTCAATTCAGTACCAGTTAGTTTGTACATTTTAGGGGGCTTTTCA
CATTAACTGCCCATTGTGTAAATTTATAGTTTGACATGATGTGTTTGTGTTTTAAAAAAAATGCATAGTATAAACC
CATTAAAGGATCTGGGAAAAGAGAAGAAAGTTTAATATAGAACTAAGCTTTTAAAGTTTGTGTTTTGTTTTAATTCT
GGTCTCGGTGCAAATGTTAGTTATGCCTTATTCATATCACAGTTAGATCACCATGCTGCAACATGGTTTATATTC
ATGCTGCCCTAGAACTTTTGTAATTATTTGTTGCAAATTTGTGACTGTCCTTATTAAGTTTCTTTTATGTAAGT
AATTTGTAAAGTTTCTTAAATTTTGTCTTTGCTTATTTAATTTTGAATAAAAGCTAAATTCCTAAAAAAA
AAAAAAA

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FIGURE 1312A

CAGGGCTGGCTTTTTTTTTTTTAAATAAGATAGCTGGTGCCCAAGATTGTTTTCCACCTTAAGGATAAAACCTGTT
AAGAAAGCCTGAACAATTACAAAAAAGGAAGAAAAGGAGACTTGGCCAACCTGGTGTGAGGAGTCTTAACAAGGTC
ATAGTTTGCCAGCCCCTGCCCTAAACAAATAATTCTTGAATGCCTACTGTGGTGTGTAAGATATGAGTAAATACC
AGGGATACACAGAGAACAAAAGAGAAAAAAGTCTATTCTTGTGAAACTTGGAAGTTGGAGGAGACTTGGAAGATG
CAGAACTGGATGACTACTCATTCTCATGCTATAGCCAGTTGGAAGTGAATGGATCGCAGCACTCACTGACCTGTG
CTTTTGAGGACCCAGATGTCAACACCACCAATCTGGAATTTGAAATATGTGGGGCCCTCGTGAGGTTAAAGTGCC
TGAATTTTCAGGAACTACAAGAGATATATTTTCATCGAGACAAAGAAATTCTTACTGATTGGAAAGAGCAATATAT
GTGTGAAGGTTGGAGAAAAGAGTCTAACCTGCAAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGCTCCTT
TTGACCTGAGTGTCTATCTATCGGGAAGGAGCCAATGACTTTGTGGTGACATTTAATACATCACACTTGCAAAAGA
AGTATGTAAAAGTTTTTAATGCACGATGTAGCTTACCGCCAGGAAAAGGATGAAAACAAATGGACGCATGTGAATT
TATCCAGCACAAAGCTGACACTCCTGCAGAGAAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTTCGATCCA
TCCCTGATCACTATTTTTAAAGGCTTCTGGAGTGAATGGAGTCCAAGTTATTACTTCAGAACTCCAGAGATCAATA
ATAGCTCAGGGGAGATGGATCCTATCTTACTAACCATCAGCATTTTGAGTTTTTCTCTGTCTGTCTGTGGTCA
TCTTGGCCTGTGTGTTATGAAAAAAGGATTAAGCCTATCGTATGGCCAGTCTCCCCGATCATAAGAAGACTC
TGGAACATCTTTGTAAGAAACCAAGAAAAAATTTAAATGTGAGTTTCAATCCTGAAAGTTTCCTGGACTGCCAGA
TTCATAGGGTGGATGACATTCAAGCTAGAGATGAAGTGGAAAGTTTTCTGCAAGATACGTTTCTCAGCAACTAG
AAGAATCTGAGAAGCAGAGGCTTGGAGGGGATGTGCAGAGCCCCAAGTCCCATCTGAGGATGTAGTCATCACTC
CAGAAAGCTTTGGAAGAGATTCTCCCTCACATGCCTGGCTGGGAATGTGAGTGCATGTGACGCCCCCTATTCTCT
CCTCTTCCAGGTCCCTAGACTGCAGGGAGAGTGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCC
TTGGGACTACAAACAGCAGCTGCCCCCTCCATTTTCTCTCCAATCTGGAATCCTGACATTGAACCCAGTTGCTC
AGGGTCAGCCCATTCTTACTTCCCTGGGATCAAATCAAGAAGAAGCATATGTCACCATGTCCAGCTTCTACCAAA
ACCAGTGAAGTGTAAAGAAACCCAGACTGAACTTACCGTGAGCGACAAAGATGATTTAAAGGGGAAGTCTAGAGTT
CCTAGTCTCCCTCACAGCACAGAGAAGACAAAATTAGCAAAACCCCACTACACAGTCTGCAAGATTCTGAAACAT
TGCTTTGACCACTCTTCTGAGTTTCACTGGCACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTT
GGTCACAAGGTTTAAAGGTGACCCAATGATTGAGCTATTTAAAAAAGAGGAAAGAAATGAAAGAGTAAAGGAA
ATGATTGAGGAGTGAGGAAGGCAGGAAGAGAGCATGAGAGGAAAGACAGACAGGAAAATAAAAAATGATAGTTGC
CATTATTAGGATTTAATATATATCCAGTGCTTTGCAAGTGCTCTGCGCACCTTGTCTCACTCCATCCTGACAATA
ATCCTGGGAGGTGTGTGCAATTACTACGACTACTCTCTTTTTATAGATCATTAAATTCAGAACTAAGGAGTTAA
GTAACCTGTCCAAGTTGTTTACACAGTGAAGGGAGGGGCCAAGATATGATGGCTGGGAGTCTAATTGCAAGTTCCC
TGAGCCATGTGCCCTTCTCTTCACTGAGGACTGCCCCATTCTTGAGTGCCAAACGTCACTAGTAACAGGGTGTGC
CTAGATAATTTATGATCCAACTGAGTCAGTTTGGAAGTGAAAGGGAACTTACATATAATCCCTCCGGGACAA
TGAGCAAAAAGTAGGACTGTCCCCAGACAAATGTGAACATACATATCATCACTTAAATTTAAATGGCTATGAGAA
AGAAAGAGGGGGAGAAACAGTCTTGCGGGTGTGAAGTCCCATGACCAGCCATGTCAAAGAAGGTAAAGAAGTCA
AGAAAAAGCCATGAAGCCCATTGATTTTCTGAAAAATAGGCTCAAGAGGGAATAAATTAGAACTCACA
ATTTCTCTGTTTGTACCAAGACAGTGATTCTCTTGCTGCTACCACCCAACTGCATCCGTCCATGATCTCAGAG
GAACTGTGCTGACCCTGGACATGGGTACGTTTGACGAGTGAGAGGAGGCATGACCCCTCCCATGTGTATAGAC
ACTACCCCAACCTAAATTCATCCCTAAATTTGTCCTCAAGTTCTCCAGCAATAGAGGCTGCCACAACTTCAGGGAG
AAAGAGTTACAAGTACATGCAATGAGTGAAGTGAAGTGTGGCTACATTCTTGAAGATATACGGAAGAGACGTATTA
TTAATGCTTGACATATATCATCTTGCCTTTCTTGGTCTAGACTGACTTCTAATGACTAACTCAAAGTCAAGGCCAA
CTGAGTAATGTCAGCTCAGCAAAGTGCAGCAAACCCATCTCCACAGGCCTCCAAACCCCTGGCTGTTTACAGAAC
CACAAAGGGCAGATGCTGCACAGAAAAGTGAAGAGGGGTCATAGGTTTCATGGTTTTGTTTGAAGATTTGTTGCTA
CTGTTTTCTGTTTTGAATTTCTTCTTTGTTTCTGTTTTTACTTTATTTAGGGGGACTAGGTGTTTTCTGATATTT
TAGTTTTCTGTTTGTGTTTTGTTTTGTGTTGTCTGTGAATGGGGTTTTAACTGTGGATGAATGGACCTTATCTGTT
GGCTTAAAGGACTGGTAAAATCAGACCATCTTATTCTTCAGGTGAATGTTTTACTTTCCAAAGTGCTCTCCTCTG
CACCAGCAGTAATAAATACAATGCCATAATCCCTTAGGTTTGCTTAGTGCTTTTGCAATTTTCAAAGCACTTCCA
TAAGCATTCTTCCACCTCCTTGATAGGCATTTATGGAAGCCTGCTACATGTCAATCATACTGTTAGGCACAGG
GGACCTAAAGACACATAAAAGGATGGCATTCTGCCTCATAAATTGCAAAACCTAATGAAAGTGACTGCTTGGTAA
ACAAATTATTATTATATTATAAAATGCTATAAAAGAGCCATATTGAAAGTGCCCTGTTGGAGACAGGGCAAATGC

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FIGURE 1312B

CACAAAAATGATGTAAATTTACATGGAGGAAAAGTAGAATCTGCCTGGTTTGTAGGCAGCAGAAGACATTTTTCAT
TCAGTGGGCAGGTGTTCTTTACCTTTTGTAGAAATGGGAGTCAAGTCTCAAATAGGAGGCTCCACAAAATCTCAT
GCCAGGTCTCTGATACCTTATTCACAGAAGTTCTTTGAAGTATTTATTGTTATTTTCTTTGACTTATGGGAAAAC
TGGGACACAGGAAGACAGGTAAATTACCCAACCTCACACGTTAAGTCAGAACTGGGAGCCATAATTTTGTATCCC
TGGTATAAATAGACAATCTCTTGAAGAAATGAAGAGATGACCATAGAAAAACATCGAGATATCTCCAGCTCTAAA
ATCCTTTGTTTCAATGTTGTTTGGCATATGTTATCTTTGGAATTTAGTGTCTGAGCCTCTGTCTGTTACTGTAGT
ATTTAAAATGCATGTATTATAATCATATAATCATAACTGCTGTTAATTCTTGATTATATACCTAGGGACAATGTG
TAATGTAAGATTACTAATTGGTTCTGCCCAATCTCCTTTCAGATTTTATTAGGAAAAAAAAAATAAACCTCCTGAT
CGGAGACAATGTATTAATCAGAAGTGTAAGTGGCAGTTCTATATAGCATGAAATGAAAAGACAGCTAATTTGGT
CCAACAAACATGACTGGGTCTAGGGCACCCAGGCTGATTGAGCTGATTTCTACCAGCCTTTGCCTCTTCCTTCA
ATGTGGTTTCCATGGGAATTTGCTTCAGAAAAGCCAAGTATGGGCTGTTTCTAGAGGTGCACACCTGCATTTTCTTA
GCTCTTCTAGAGGGGGCTAAGAGACTTGGTACGGGCCAGGAAGAATATGTGGCAGAGCTCCTGGAAATGATGCAGA
TTAGGTGGCATTTTTGTGAGCTCTGTGGTTTATTGTTGGGACTATTCTTTAAAATATCCATTGTTTCACTACAGTG
AAGATCTCTGATTTAACCGTGTACTATCCACATGCATTACAAACATTTTCGAGAGCTGCTTAGTATATAAGCGTA
CAATGTATGTAATAACCATCTCATATTTAATTAATGGTATAGAAGAAC

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FIGURE 1313

MHDVAYRQEKDENKWTHVNLSTKLTLQORKLQPAAMYEIKVRSIPDHYFKGFWSEWSPSYFRTPEINNSSGEM
DPILLTISILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLCKKPRKNLNVSFNPESFLDCQIHRVDD
IQARDEVEGFLQDTFPQQLEESEKQRLGGDVQSPNCPSEDVVITPESFGRDSSLTCLAGNVSACDAPILSSSRSL
DCRESGKNGPHVYQDLLLSLGTNTNLPPPFSLQSGILTLPVAQGQPILTSLSNQEAYVTMSSFYQNO

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FIGURE 1314

CGGGCGAGAAGGGCAGACGGGACATGCAGCCTCTTCCGCCTGAGCCCCGGAAGTGATGTGGCTGCGGCATCGCGG
CCTCGCTATGTCTGCCATTTTCAATTTTCAGAGTCTATTGACTGTAATCTTGCTGCTTATATGTACCTGTGCTTA
TATTCGATCCTTGGCACCCAGCCTCCTGGACAGAAATAAACTGGATTGTTGGGTATATTTTGGAAAGTGTGCCAG
AATTGGTGAACGGAAGAGTCCTTATGTTGCAGTATGCTGTATAGTAATGGCCTTCAGCATCCTCTTCATACAGTA
GCTGGGGAAAATGCCAGAAATGTAGTTGCCATCAGATTTGATTGTGAACAAGGACTGACTGCAGAAAATAATGGAA
AGGATGTTTTAACTCTTTTATCTCCGAACATTGAATGAGATAAATTTCCAGATGCTGTTCTCTATTTTAATGTTAT
TGGACCAATGTTCTGTATAAAACAATTAAGATGTAACCATTTAATAGTCTGTAACAATCAACCTCAGTACTGTCAC
TACAATATTACATTCTGCAAATGTTATTCTGTTGTATCAGATACAAAATTTTAGTGAGGTATCTCTAAGGCACAT
AGTAGAAAACAAAATTGGTTAATTACTCAAGTTCCTTTCACTGTGATTTGGAAATGATTTAATCTTTATAGAATG
AGAACCTTTTTTGGACTAGCTTTTTTATTAAAATGGCTCAATTTGTGTTGATAAGGATTGCATTAATATTTAATA
GTGCTTGCTTTTCCTCTGGGCACACCATTTTGATCATTAAACCAGAGTACCTCTACTCTTAGCAAACCTCTAGTTTA
TGACAAGTATTTAAAATATTTAAAACAAGCTTATGCAGTTCCTTAAGGACGAAGGTAAATGAGATGTAACTTAAAA
ATAGTATTGGGAAAATGTTGATAGTTAACATTAGTGGATTTAGACTAGCCAAATGACATAGTAGGCTCTGAAACA
TCTTGTCAAGTATATGTATTTTGTGCATGAATTTTGTGTTGAAAGCTGTCTTTCTCTGAAAAACACAACGTTCTT
AGAATGAAAAGAACAATTATAAAATAAAAAAAAAAATTTAAAAAAACTGGGCGGGGG

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FIGURE 1315

MSAIFNFQSLTIVILLICTCAYIRSLAPSLDRNKTGLLGIFWKCARI GERKSPYVAVCCIVMAFSILFIQ

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FIGURE 1316

GGAATTTCGGCACGAGCCCGATTCCGCGCCCGCCATGGCCGACAAAATGGACATGTCTCTGGACGACATCATTAAA
CTGAACCGGAGCCAGCGAGGCGGCCGGGGCGGGGGCCGCGGCCGGGCGGCTCCAGGGCCGGCCGCCGCGGTGGG
GCGCAGGCCCGCCGCGGAGTGAATCGAGGCGGCGGGCCCATCCGGAACCGGCCGGCCATCGCCCGCGGCGCGGCC
GGCGGAGGCGGCAGGAACCGACCGGCGCCCTACAGCAGGCCAAAACAACCTCCCGACAAGTGGCAGCACGATCTT
TTCGACAGTGGCTTCGGCGGTGGTGCCGGCGTGAGACAGGTGGGAACTGCTGGTGTCCAATCTGGATTTTGGG
GTCTCAGACGCCGATATTAGGAACAGCAAACGTGCACCTTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
TCTGGTCGCAGCTTAGGAACAGCAAACGTGCACCTTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
AACGGCTTCCCTCTGGATGGCCGCCCCATGAACATTCAGCTTGTACGTCACAGATTGACGCACAGCGGAGGCCT
GCACAGAGCGTAAACAGAGGTGGCATGACTAGAAACCGTGCGCTGGAGGTTTTGGTGGTGGTGGAGGCACCCGG
AGAGGCACCCGCGGAGGCGCCCGTGGAAGAGGCAGAGGTGCCGCGAGGAATCAAAGCAGCAGCTTTCGGCAGAG
GAGCTGGATGCCCAGCTGGACGCCTATAATGCGAGAATGGACACCAGTTAAACAGACCAGCAAATCCGCGTGCGG
AACAGGACCCAGGCGTCTCCTCTTGCTCCCTGGTTGGGGGGCGGTGGCTGGGGCTGTGCGCCCAATGATGGATTT
GTTTCTTTTATGTTTTAAATAGGATTTAAAAACTCATGTAAAGGTTTTTTTTTTTTCTTTTTTTTTTTTTTAAT
TCTGAAACAGACCTGTTTTGTACCGAGTTATTTTGGGATAAATTTTACTGGTTGCTGTTGTGGAGAAGGTGGCG
TTCCACCTTTTCCATAATAAAATAGAAATGTGTGTAA

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FIGURE 1317

MADKMDMSLDDI I KLNRSQRGGRGGGRGRAGSRAGRRGGAQAAARVNRGGGP I RNRPAIARGAAGGGGRNRPAPY
SRPKQLPDKWQHDLFDSGFGGAGVETGGKLLVSNLDFGVSDADIQELFAEFGTLKKA AVHYDRSGRSLGTANVH
FERKADALKAMKQYNGFPLDGRPMNIQLVTSQIDAQRRAQSVNRGGMTRNRGAGGFGGGGGTIRRGTRGGARGRG
RGAGRNSKQQLSAEELDAQLDAYNARMDTS

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FIGURE 1318

GGAATTCGGCACGAGCCCGATTCCGCGCCCCGCCATGCCGACAAAATGGACATGTCTCTGGACGACATCATTAA
CTGAACCGGAGCCAGCGAGGCGGCCGGGGCGGGGGCCGCGGCCGGGCCGGCTCCAGGGCCGGCCGCGCGGTGGG
GCGCAGGCCCGCGCGCGAGTGAATCGAGGCGGGCGGGCCATCCGGAACCGGCCGGCCATCGCCCGCGGCGCGGCC
GGCGGAGGCGGCAGGAACCGACCGGCGCCCTACAGCAGGCCAAAACAACCTCCCCGACAAGTGGCAGCACGATCTT
TTCGACAGTGGCTTCGGCGGTGGTGCCGGCGTGGAGACAGGTGGGAACTGCTGGTGTCCAATCTGGATTTTGGG
GTCTCAGACGCCGATATTAGGAACCTCTTTGCTGAATTTGGAACGCTGAAGAAGGCGGCTGTGCACTATGATCGC
TCTGGTCGCAGCTTAGGAACAGCAAACGTGCACCTTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
AACGGCTTCCCTCTGGATGGCCGCCCCATGAACATTAGCTTGTACGTCACAGATTGACGCACAGCGGAGGCCT
GCACAGAGCGTAAACAGAGGTGGCATGACTAGAAACCGTGCGCTGGAGGTTTTGGTGGTGGTGGAGGCACCCGG
AGAGGCACCCGCGGAGGCGCCCGTGGAAGAGGCAGAGGTGCCGGCAGGAATCAAAGCAGCAGCTTTCGGCAGAG
GAGCTGGATGCCAGCTGGACGCCTATAATGCGAGAATGGACACCAGTTAAACAGACCAGCAAATCCGCGTGCGG
AACAGGACCCAGGCGTCTCCTCTTGCTCCCTGGTTGGGGGGCGGTGGCTGGGGCTGTGCGCCCAATGATGGATT
GTTTCTTTTATGTTTTAAAATAGGATTTAAAACTCATGTAAAGGTTTTTTTTTTTTCTTTTTTTTTTTTAAAT
TCTGAAACAGACCTGTTTTGTACCGAGTTATTTTGGGATAAATTTTACTGGTTGCTGTTGTGGAGAAGGTGGCG
TTTCCACCTTTTCCATAATAAAATAGAAATGTGTGTAA

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FIGURE 1319

MADKMDMSLDDIIKLNRSQRGGRGGGRGRAGSRAGRRGGAQAAARVNRGGGPIRNRPAIARGAAGGGGGRNRPAPY
SRPKQLPDKWQHDLFDSGFGGAGVETGGKLLVSNLDFGVSDADIQELFAEFGTLKKAHVHYDRSGRSLGTANVH
FERKADALKAMKQYNGFPLDGRPMNIQLVTSQIDAQRRPAQSVNRGGMTRNRGAGGFGGGGGTRRGTRGGARGRG
RGAGRNSKQQLSAEELDAQLDAYNARMDS

[illegible]

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FIGURE 1320B

CCTCAGCATCCCCTCGACGGCCTGGAGGGACACAGCCCCGGCCAGAGGCGCAGGGCAGAGGACATCCCTTCCGG
AGGTTCTGCGGCGGAGGGCTGCCGACCTCTCCCCACGCGCCAGGTGAGGCGCGTAAAGGAAGGGGAGCTTGTCTC
ACTCACAGAGGGCCCGGCTCGCGGGAGGCGCCTGCGGGGTGGGCGCGAACTGAGATCCAAATTTCTGCCCTTTCC
ACTACGTTCCATACCCCCGCCCCTAACACAGTCTCTCAATCCAGCTCCCTTCTAACTCCCCGAAACATCCAGAGG
GGTGGGCGGGAGGAGAAGGGAAGGCCCTCAGGCCACAGACGGTGGGAGTGGAAAGGTCTGTGGAAGTCACTCTT
GGGGCCCAACCCAACTTTCAAAAAGAGGCAGCTGCAACCCTCCTAGCCGGTCTCCGTACTCAAGGACTCTCCCGA
GCCCAGAGGCGAAGGCCGAGCCCTGCGTCCAGCAGCTGAGGGGGGGCGGCCCTGACCCCCTGGCCCCGCGGCC
CCGCACAGACCCAGGGCAGCCCCGGCTCCCGCGGCCCGGCCCTCCCCAGATCCCGGAAGGAGGCCGCCGCCAGC
CGCGCCAGCGCCAGTTGTTACGTTGGTCCCGTCCTCCCGCTCCTCCACGATCCAGTGGGGGTTCCCTGGCCCCA
CTTGCCCATGGCGGCGTGGACTGGGCGGAAAACAAGGAAAGGCCGCGGCGCCTAAGGCTCCGAAGCCAGCGTTTC
CGGCCGCCGAGCCCCGGGCGGCGCGTTTCGCAGCTCCCAGAACTGCCAGAAGC

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FIGURE 1321

MKTETREVLTPSTSDNETRDSSIIDPGTEQDLSPENSSVKEYRMEVPSSFSEDMSNIRSQHAEEQSNNGRYDD
CKEFKDLHCKDSTLAEEEESEFPSTSISAVLSDLADLRSCDGQALPSQDPEVALSLSCGHSRGLFSHMQQHDILD
TLCRTIESTIHVVTRISGKGNQAAS

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FIGURE 1322A

TGACAAAATCTTTTATTTATTTAAATGTTAGTAATACGTTTATTGATGAGACTAGGAGCTTCTCTGCAGCATCTT
CATAAATACATTGGTTTTAGTTCCACACTATTCCACATCTTATCTGGGAAGATTAGAAATACAGATGTAATATG
GAAGCTTCAACAGCATGGGGGTGGTGATAGTGTCTTATTTGCCCTTGGTAAAATATTAAAGCGTATTTCTTAACC
CAAAGAGTGATTGGTTATATGAATATATTTGAAAAAGTTAAAGCAAATTTGCAAACCTTTACAAAATCATGTATC
AATTTTATGCTATCCAGTTTTTACGTACCCATGTGTCAACATTTTCATATATCCAGTTCTTTGGGTGCTGGTTCAC
TTTTTTTCATTTATTCAAATTCAGAAAAATACGGACGGATCTAATGTTAAATTAACCAGAAACCTTGGAACATTC
ATATCTTGAGAGGGAATTTGCTACTCTTTTACTTTTGGGATTTTCATTATAAAATAGGCTCATTTTATACATATGT
CCTGTGGTCTGTCTTCCAGAGTGTGCTGTAATCATAAGTCTCTAGCAAAGAGTGGAGGGTGGAGGGTGTGTAGAA
CTCCACTCAGCCTCATGGATACATCTACAAGTCTCTCAACCCATCCTGTTACAGTTCTCCATGAGAGTCACCTCA
CACTTGGAAAAGAAGGAGGTTAAAGCAGAGTATTGTTGGCAGCCAGCTATGCCATCCTCTTGTAATAAATTTT
CAACACACCCATTTTCTTGCCTTAAGGTGCAGGTTCTTACTTCTACAAAATTTCAAATGATTGCAGGTCAAAAAC
CTTTGGAGTTACTCACAAATAATAATAAAATTTCAAATAACTAGGGTCTACTTGTCCATCAAGATGACATTACCA
GTGGAACCCACCTGTTAATTTTAAAGTAGCTTCAGAACCCAAACAAAATTTATGTAAGCCTGGTTAAATGTCCTTT
TTTCTTCTTGCCTCTAATAAAATCAGGATCTTCGGCCTTGATACTAAATATGTGTATATTTAGTTATGATGGTAC
TTGTAGATGCTCACATTTCCAGTTCCAAACTCGCCCGTACTTTTTATGTGCTTCAAATATTGGACACATTTCTG
TTAATATATGATTTCTGTATCCACAAACCGCTGTTTGCTTATGCTGAGTCAATTTAGAAGTTAATTTCCAATCTA
GTCTCAACTGCAATGCATTTAAATAGGTAAAAACAAGTAAATGAGTTTGGGACATTTTGAGATTAATGTTACTGC
CCACTTGACTGTCAATTTCAAATGGCTCCTAATGCAACCAAAATTTATAACCAATGTAGCATGTGTAGGAAAGGTA
TTTTTAATTAATTTAAATCATTGTGTATATTACAGCAGTATGAGGAATGCCTGGCTAAAGAGGATTTTTTAAAG
ATGAAGAATGGTTTTGCTTGTATTATATAGGCTTACTGAGTTTGTGAGCAGCATAAAAACAATCATTCCTTAATT
CTTCATTGTGGAACCTGAAATATTTCTGTAATGCATTTTTTAAAGGAGACTCCTAGACACAGCTGTAATAGTGGG
AATAGAAATGTAGAGCTTTTCTCATAACACAAAACAGAAAATAATTTTACGACATTTGACTTACTCTATGTAAT
AAGGAAAAAAATTTGTTTCCACAAAGTTGAAGTATGTAGTAATATTGGTAACATATGGCATGGCCACTTTATATC
ACAGAATGTGTGTCAAGTTGCAAAGCATACTTGGGCCATAGCAGACACTAAGAATTAAAACTCTTAAATCAGTGA
AACAAAACCTAATGGGCAGCATTCTCTGTTTGGAAATGGGATCAGTATACAATTAATACAATTTAATTTTACAC
ATTCCTTAAGACACCATTTTTTAAGTTACAGTCACATGAGTGTGTTGTATAAATTTAAGTCAATGCTTTTAGCCTAG
GCAAAGCTAAATACAAGGTTTTTGGGGTTTTCTTTTTTTCAGCTTTATTATTGAAGTATTACAACTTAACATCAG
ATACCAATGTGTAAAAGTACTATTGGGTCCCTTAAGGGCTCTATCAGGGAGTTGAAATTTTCATACGCTTTACCAG
GTTACTTGTAAAAAATGAACAGCTGTAAGACATTTCAAACCATTTGCAGACACATTGTTAAAAATGCAGCCATTTG
ATAATGAAAGCAGAAACCTTAAGTTTACCTAATTATTGCACTAAATGTAAATGATAACATAAAATTAAGTGTGC
ATTTTAAACAGATTCTATTTCCCACTTACTGCTTAGCATAGAAAAGAGCTATGGTTAGAGGAGTGACCAGCAAG
ATTTATTTTCAGATGGAAGGGGTGAGAAAGTGGAAAGCACCTTACTGTTAGAGCATGTTGCATCTATTTAGTGCT
ACTGAACAATTCAGTAGTTATTTCTGAACCTTTGCTGCAAAGTGCTCTTTAGTTAAAGCACATTAAGAAGGGTCAC
TGCTTAATTGCTTTGTAAAATGAAGCAATGGTATTTTTTATCCGATATAGTGTAAATTTAAAGTTTTTCTACAAA
GTGAGTTTATATTGTTGCCTAAACTATGTTATGTAAGCAAAGTTTTTGGAAAGGCGGGAGGGAGTCTAGATTCCG
CGAGAGTGTGCGTTTTGTGTGTGTGAATGTATGAAAAGTTTCCCAATTGGGTTATTCTTAAGATGTGTTTATTGTA
AAGTTTTCTACGTTTTTGGCCACAGTAAATGTACAACCTTCGCAATTGTAGGATTTAATTGATTGAATTCAAAATTT
ATACTGTCTCTTCCCTTCTGCAGAGACATTATGCCACTGTAAAGTGCATGTACAGAAAATACCTCTGAGGTTGAC
TTGTTAAATAACTGATGAATGTTATTTACACTGAATCTCAAAGCAGTCATTTGTTTTGCGGGTTAGGGGAAAGT
TTTGTTTTTGTGGTGTGTTTTTGTGTTTTTAATTAGGCACACTAAGAGTGGCTAAATTTGGGGGAATTTGGTGG
ATAGGAAAGACCTTGAAAAGTGTATGTGTAGATGAAAACACAAGGTATGGATGTTGGTTACAGAGTTCAGTTTTAA
CAAGGGAAATTTGGGGATTTTTTTTTTTTTTACTTGCATGTTCTATGGGTAGCTATCAAAGGTGTAACAAATTAT
TCCAGCTTTTCCCAATACTAATTATATTGGTTTTTAAAGTCTGCATAATCACTAGGTGGCATTTTCCCTTCATT
TGTGAACCAAGAGGGGTAAATGATGCTACCCATACAGTGACTTCTGAGTTCTTTAACTTTGACAGAATCTCCATT
GTTTCATTGAATTTCTCATTGTATTATATGTCTTTCCAAGTGTGCAAACTATAATATGTAGTTAATGAAAAATGG
AAGGCTGCAGATTATTTGTCATGAATAATTAATTGCCCATTAGGGCTAAGGAGACTGACATGATTTTTATCGGTT
CTGGGTAAATGAAAATTTTAAATGGAAAACCTATTCACCATTTACTAGCTTTGTGCAATATTATAAAAGGTAGAAG
CAAAACACTAGCACATTGTGCTTTGCTTGGCTTGTAAGGATGGCTTTAGTACCATTACATTAATGGACAGTGTG

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FIGURE 1322B

CACAGTGTATTGTAAATGCCAACTCTTGCAAATTTACAATACTTAAATATGTTCAATTAACATCCTAAAGTATTA
AAAGTACAGAGGAAAACTAAGCAAGCATTTATAGCAATACCATGAAATCTCCAGTAATCGTTTTGACTGTTGCC
TTTTGCTCTTTAGTGCAGCTTTTCTGCATTGTAATTGTATTGCTTTGTATTTTCATGTTTTTACACTCATGACTT
CAGAGTTAAGTACTTGTACACCAAGTATTGCAATCACCTTTCTCTTGTTGTACATGCAATGTAACAACCTACAGT
TTTGGTGCTTTTAACAATATTCCCTCTTTTCTTTAATAAAGGATATTTATTTGAATTAACCTGATTTTGTGTT
TAAATATCAGTGGTACATATTTCACTTCATTTCAAATAGGAGGACCATAGCAAATTGTATACTGTTATGACA
AAAGTTNTAACATGGAGAACAGGATCCAGAGACCATCCATGCCTGTATTTCTGCCTCTTCTGAGCGCTGTTTGT
TGTGACATATTTTGATGGCAACTTCTTTGTGCTATTAATGAACCTTCTCATTGTTTATAAATATTCACAAAGTT
TGGAAGTGCTGACTTCCAAATTGGAAAATTTTAAATGGGGGTGGGGAGAGGCAGAAAAATATTTATAAAGTTAC
ACACTCA

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FIGURE 1323

TKSEIYLNVSNTFIDETRSFSAASS

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FIGURE 1324A

GCCATGTCCTGCAATTTATGTACTATGGAACATATAGAGCTGAGTATGAATACCGTTCATGAGATTCTTCAGGCTG
CCATGTATGTTCAACTTATAGAAGTGGTGAAGTTCTGCTGCTCTTTTCTCTTAGCGAAGATCTGCCTAGAAAATT
GTGCAGAAATTATGAGACTCTTAGATGATTTTCGGCGTAAACATCGAGGGAGTCAGGGAGAAGTTAGACACCTTTC
TGCTAGACAACCTTTGTGCCACTCATGTCTAGGCCTGACTTTCTGTCTATCTGAGCTTTGAGAAGCTCATGTCTT
ACTTGGATAATGATCATCTGAGCAGGTTCCCAGAGATAGAGCTGTACGAGGCTGTGCAGTCTTGGCTGCGGCATG
ATAGAAGACGCTGGAGACATACCGATACCATTCAGAAATATCCGGTTTTGCTTGATGACCCCAACCAGCGTTT
TTGAGAAGGTTAAGACATCAGAATTTTATAGATACTCCCGACAGCTCCGTTACGAAGTTGACCAAGCATTGAATT
ACTTTCAGAATGTTTACCAGCAGCCTTTGTTGGATATGAAGTCAAGCCGCATCCGTTCTGCAAAACCGCAAACTA
CAGTATTTTCGAGGAATGATTGGACATAGCATGGTTAACAGTAAAATACTTCTCTTAAAGAAACCAAGAGTCTGGT
GGGAGCTAGAAGGCCCAAGTACCTCTGCGACCTGACTGCCTTGCTATCGTCAATAATTTTGTGTTCTGTAG
GCGGGGAAGAGCTGGGCCCGGATGGTGAATTCCATGCTTCTTCCAAAGTATTTCAGGTATGACCCGAGACAGAACT
CCTGGCTGCAGATGGCAGATATGTCTGTACCAGCTCTGAATTTGCTGTAGGTGTTATTGGGAAGTTTATTTACG
CCGTAGCAGGCAGAACCAGAGATGAGACTTTCTATTCAACTGAGAGATATGACATCACCAACGATAAATGGGAAT
TTGTGGATCCTTATCCAGTTAACAATATGGACATGAGGGGACAGTGTCTAATAACAATTTGTTTATCACCGGTG
GAATCACCTCATCTTCCACCTCCAAGCAAGTGTGCGTGTGTTGACCCAGCAAAGAAGGGACCATAGAACAACGGA
CCAGGAGAACTCAAGTGTTACCAACTGTTGGGAGAATAAGAGCAAGATGAATTACGCGAGATGCTTTCACAAGA
TGATTTCTTACAATGGCAAGCTTTATGTCTTCGGTGGTGTCTGTGTGATCTTGAGGGCCTCTTTCGAATCTCAGG
GATGCCCTTCTACAGAAGTATACAACCCAGAGACTGATCAGTGGACCATCTTGGCATCCATGCCGATTGGTAGAA
GTGGCCATGGTGTGACTGTGCTGGACAAACAAATAATGGTTCTTGGAGGCCTTTGTTATAATGGTCATTACAGCG
ATTCCATCCTCACTTTTGATCCGGATGAAAACAAGTGAAGGAAGATGAGTACCCTCGGATGCCCTGCAAGCTGG
ATGGTTTACAAGTATGCAACCTGCATTTTCCGACTATGTACTGGATGAGGTGAGGCGTTGCAACTAATGACATC
CTCCTCCCTAAAAAAGAGGCAAAACAAGTATTTGTTTGACAGAGTAATTAATTAACATATAAAGAAAAACC
TCACCAGTTTTACTATCAAAGCCATTGGTCTAACATTGTAAGAATTTTTCATTCTGTGCTAGCATCCTTTTTTTC
TTTTCAGTGGCCTCAAACCTCATGCAATAAGTTAATTCTAAGTGCTAGCTCTTGAAACTACTTCCAGAAGCAGTTG
AATAGAATGCTCCACTTATCTGGGATATTGATTTTCTGCTTTAAACATTTCTTTTCAGATGTTAGCGTAGGAGTCA
TGTGTCTTCTAAGAGAAGACCCGATAAGTGTCACTGGATGTGATTTTCAGTCTCTGTCTCTATCTGAAACCTTTTT
GAAGATTTATTTTCAGTGTATTTTCAGTCTGTTATACTTTTTAGTTTTATTATTTAAAAGTTTAAAACCTTTGACCT
TTTTGCATGGCTTTTTGCTGAAAATGCAAAAATATAAATTTTCTACAAAATTAACCTTTTTATATTCAAAACACTA
TTTCTAAGCTGCCTTCTCTTATCCGCATTGTGTTAGTGAAAGCATATTCTACTCGCATACAACCTATAAATACA
CAAGGCACATCCCTTTTATGCGTGGTTAGGATCTATATTTTAAAGCTAGTGCACCTTACTTGCACACACAGTTTCG
CCATACTTGTGTAATTTTAGATGTAACGTCTTTTACATATTAACATTTTGTAGAAAGTTGAAATAACTGGAGTCC
TCATTTGCTATCAAAGTAGCCTATCTTCAGTCCATACTGATTTCAGTAATATTTGAACTCCTTATATTTCTGAAAC
ATGTATGGTTATGAAAATAACACCTTATATTTTATTTTCAAAAGTAAATGTTAGTGTTCTTTGTGCGATGTATGT
CTTTTCTTTTTGAAAATGTTTTTCTTTGCAGTCTGTTTAAACGTTACCCTGTTTTTGTAGTGAAGTTCGGAGTGGTAT
ATGACAAGTTCGGCCCTGCAGCATGCAAGCACTTTTAAAGAGCATTTAGGTAATACCAGACTCCTAAATCAAGG
CCCCTTAAAGTAAGTGCAACTCCCATTTTTTACATTCAGTAAGGCTGCTGCATTTGTTATTGAATGGAAGGTAG
AAACTCTTAGAAAATTTGACCTCAGTTTGTGACTTAGAGGTAAGAAATAGAATTATAATGTTACTGGTTTTATCTA
CTTGTTTTATTTGTACAAAATACCCAGCGACACTAGGGATGTAAGCCCTCAGTTTTTGTTTTTATTTACTGAAAGC
TATTAGCATGAAGGATAGTAACCACAAAGTTCAGAATGGATCAAGAATAGCTGTTTAAAGCATTATATAATAAGT
GTTTTAGGATTAGCTGCACCTTTCAACTCTTTAAATGCAGAGGAAAAACATAGTTGACAAAGTTAAGCAAGAAT
AACCTGGGAGTGGATCATTGAAATTGATGCCATTTGCGCATGAGTAGTCTATATCTGATACAGACTAGATCTATA
CTGGCAAACTTGCCAGATCTTAGAATATTGGTGAATATTGCAATGCCTTCTATATGGCTGCTGATGTATAAAT
TTTTCTAGTTTCACTTTGTTTGGTGTTTTTTGTTTTTTGTGTTGTTGTTGTTTTTTTTGCTGCTGCCACCATTGA
ACATAAATGGAAGTGTGAAGTCATGGAATGTGAAGACTTTGGTTTTTGGGGGTTTTTGGGCAGTTATTAGAC
ATACTATGAGATTAAACCTGATCTTCAAACCTCAGAATTGGAGGCATTTGGGTTTAAAGAAACCAGGTACATAAGT
AGCTTTTGAAAAAACCATTGGCATTGATTTCAAAAATCAATAATAATCTTATTTTATATATGAGACTTATATTTT
CATTAACTAGTCTGTCAATTTACTTACAGTTTCCAAACATGAAATTTGGTATCTTGTGTTCCCATGGTAATATGGG
TAAAGTCTTTTTCTACATTTAAAAAATACATTATTTTATTTTGTAAAGTTAGGAATAAGTTAGCCATTTAATTT

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FIGURE 1324B

TTTTCTACATTAGTTTAGTGGCTTTGTATGTGTGCTATTTTGCTTTAAAGAAAAATAACGTCTTCATTATTTTCCT
CATTGATGTCTTTTGCTAGAAAAGACCAAGAAAGAGCCATCAGGCCAGGTATCCACATCAAAGCCTTTACACTAT
AGTGGTGGTTCTCTTTAATTGCTTAGATATGACTTCATGACCCTAGTCAGGGTGACATCTGGGCAAACATTTGAG
TATTCTTGGTCTTCCATTTTAAAGACAGAGGCCAAGATCAAAGTTCATGTTTTGTAAATTCGTAAATCTTAAC
TTGAACTAACTCTGGGTTTCAGCTTTACGTAAGTCACGTCGGACCTGATGTTAGCTGTAATCAGTTTTGAGCTTTA
AGGATAGTTGCTGTTGCTTGGGTTCTGAATGTATGAGAAAACCTCCCTGTTTATATGTAGTTCTAATTTAGGTTAT
TTTAAATCCATGATTAACTTACATTCCCTTTTAAATTAATGGTTTTATTGCTGCAAGAGATTTATTTTTGTTATA
CTAAACTATGGAAGTTTTTCATAGCATTTTTTTCAAGTTTTATTTTTGTGTGCTTCATTTGGAGTTTTTGTTT
ATATACATTGCGCTCAAAAAGTAGTTTTTTGAAAATTCAGTAAGATTTGAATCTATACAGTTTAACTGTTATG
ACCTTTAIGCGTGTGTTTTCACTTTATATCTCAAATGCCAGAGTTCACAAAAATAGCTGATCTTCATTAATTAC
ATCTTAATTAGAACCATTTGTCTCTTCCGTGCTTTGACCTTCTAAGTTTTGATTTTAAAGAAATTCCTTGCAC
TACAGCCTTTTCTTAAATGCAAGATTCTCACTTTGAAGGTTTTGTGTTGGAAGAAATGCTACTGGTTTTTAAAA
AGCAAAGCTTAACTAATAGAATTATTAGCTTTTCTTGAGACAGCTTTCTGTGTCCTCATTACTCTGCTCTGTGTG
AGTGTTACTAGAATTTGTGAAATACTGACTGAGCCCTTCACTTATCTTTTCTAAAGCAGCACCTTTGGACACCTC
ATTCTGGGAAGCCTGCTCGAGTCATAGTAAAGGACACACGCTTTATGTGGGGAGAAGTGGTAAAAATGGAGTTTT
GTCTTAATTACATGAACTAAGCTTTAAATATTTTATAACAGATTATTTGAGCTGCATAATCTAAACATGTCAA
ACGTTTCAGTGGGACTATTTTTATATATGTATATGTGGGTGTAGGTCATAACATTTAGTTTATAATATAAATTGT
TATTTTCAGTTTATAAGCTATCTCTCAGAGGAGACTAGCTCTTTTGAGAATTCATAATTTAAAGTTTTAGACTGAA
GTAAATGCAACATAGATAATAGTGTAATCAGATATAATTGAGGGCTATATGGCAGTAAAACTGCTAGTGCCAG
TTTTCTTGTTTGCCTGTTATACATTTTTGATTTTTGTTTTGTATTCTGAACATTTTGAGAGATCATATGTTTGT
TCAATTACATTTAGAGTTGGTTTGGGAATAAATATCTTCTAAAAAGAGATTTATCTTAAAAATGGAAGTCCTAAA
AATTAGTTTATCCAGAGTTTATAAAGTCAAATATTCAGTAGGCATAGACTGGAATAGATAAATTCATGGAAATCA
TATCCTTTTCAGTACACCGTATAAATTCAATATTACACAAGTAACATTGAGGAGAATGCCATCAGCTTTGTTCTCC
CTTAAATTCCTTTGGTTTTCTTTTTACATTTTGGGAACAACCTGCATTTAAATGTTATTAGTCAGTATATAGTAAG
GATTAGGTGTTTGGCTTTCTGAAGGAATGGTCCAGTGAGGTGATTGGGAGAGGTTATTTTCTACCTAACTTGTTATA
TGCCCTATACCTCTTGGGCATACTTTGTCTATAGAAAAATTTTTGACCTTTAGGTACATTTTGGGCCAGTAGTC
AAATAATCCTAGGGCCGATATAAAAAATCTTAGAATAATTTAAGGTTTGCCTTTTATACCTGTTTTGAAAGCCTTT
ACATTTTTGTCAGGTAATTTTTCCCAAGCCGTGGATATAATCTATTCAAACATGTTTATGCTATCCATTCTGTTT
TTAAATTGAAAAAATGTTAAAAGTGTATGAAGAAAAGTTTAAATAAAATATTTTAAATCTTT

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FIGURE 1325A

GCTCATTGGGGGCATGAATGTTCTCCTTACTAACCTCTCATGGAGTCATGTGATAACAGCCATGTCATGTGTAT
GGATGCCACCATTCTTGAATTTCTGCTAGAAATAAGTAGGTTGCTATGCACTTAGAGTCATCTTTGCAAGGGACT
CATTCCAAACCAATTCCAATCGACCTGAAAGTCCCTTGCACTAAAGAAATGTGATTTTTTTTTTAACCCAAGGAGA
AAGTTGGTTGTAACAATTTTACCAGAATTAGCAATCTGATAGAATAGGCTTTTTTAAACAGGAATTTTAACTG
GCGGTGCCAGTTGCAGTGAAGGTGAAGTGGCTATTGCTTTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNCCTGAAGATAGAGCGTTGAACAAACCCAATGGTCTTGGCCCTCAAAAAGCTTTATGTGACATAGAGCA
TCCAGCTCGACAATTAGCAAACCCCTGATATTATTATCATGGACTTGACATGAGGTTTGGACTATTATGAGCAACA
GCAGAAGGTCCATGACCCCTACAAATTTACATTTTTCTATGGCCCATATTTGAAAACCTCACATTCGGAGCAGGC
CACTTTATATTTCGTGAGTGATCCCAAGCTCACTGACCAACAGAAAAGATGCTAAAAAATGTGTCTTATCATGTG
CCTGCTCCAACCTGATGGGTAATGTCTGCCTTTAAGCCCCAGAATGGATTCTCCAGGCACAGTGTGGAAGAGTGCT
GTGGTTGATTAGCAATGTCTGCCTTGGGTGAGGAAAGGGGAACACTCTCAAGTGCCTCTACTGTCTATCTCCAT
TCAGCCTAGCACCACATCCCCATGTAGAAGTGTGTCTTCTACTGCTTGCCACGTACAAGTGTGAAATGCCAAGG
TGAGACTCGTACACTTGGGGATTGCAATGGTTTTTACCCCTCATGAAGGTCAGAGGTGGACTATTTGTACACAT
ACACACATGCACACCCTCTCACGTCCTCCAGAGGCTGAAAGACCATCAGCATCTTGCTAACTGCCATGCATGAGC
AGCAAGGACAGCCTTCCATAATCCATGCCCCATTTCTCTGGAAGCCTGGAACTTTTCATTTCTGTTCCTTGC
TAATTAACATCTAAACATGCTTCTCATTTCCAGCCATTGCTGATGCTTCTCAGTTGAAGTTTGAGCCACATCCCT
CTTACAGCTAGTGAATGAGTTGGTAGCAGATACTGTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAGGGGAGGGTG
GGATGGGGTGTGGGTAAGTTTTGCCTTTTGTGTTTTGTTTTGATGCCGTATATAGTGAAGGGGTGAGGATATTCTA
AACAAACAAAATTGAATAATTTATTCACAGAACTATTAAGATTGTATTGTAAAGCTCACAGCAAGCTCAGTGG
GCAGCAGCTGCAACATCTCACCGGGGAAATTATTTTATTTAACGTGAGTGAGATGTGGGCCGGAGAAGGTAGCTG
AAGCTATTTATAAACGTTGTGTACCTTCTTCCGAGCTCTCTCCCTTTGTGAAGGGCGCAGCAACTATACCCTT
GATGGATGGAGATTTATGCAATGTGTTTTACTGGGTAGAGTGACAGACCTTGGCTGTCCCTGGAATTGAGAATCT
GGACCTTATTTCCAGGCAGAGAACACTGTCTCAGAAATGGGACTTCTGATAATGAAACAGGTTGTCCAACATTT
TCTAATACGCATTCTACAGAACACAGGTTCCAGGAGGCATCAGGTTGGTGTGATGCAGACTAAGGGTTTTGTGGT
CAAATATCCTTAAGAAACAAAGTTAAGTCAGTTTCTTTCTGCAAGGACTTTTCAGCCTTCAATGTGTGCTGTGC
ATGGTGAATCCCCAAAATAATCCTTGAGTCTGTAGCATTTCTGAACTTACATGACCAGGATACTCTATTTTGC
AGATACCCCCACAGAGCTAGGGTTCCACCGAGTATACCTTGCTTAGGTTGACTTAGCATATCTGAGGTCTTCAAG
GATAAAAACCTGCCACCCCAACACCCCTTCCATTAAAAAATAACAAAATAGCACCACAGTCTCCATCTGGTTT
ATAGCAACAGAGGTACTTTATTTAATGAAGCAATGGTTCTAATCCTGGATACTGCCACGGACTACAATTCTATCC
CTCCCAGAGGGAGTGGAGGAAGTCTTGGGTGGTGTGGACAGAAGGAAGAGAGAGGGTGAAGTGGGGTATAGGG
CCCAGGGTGGCTCCCTACTCCTCAGGCTCAAAAGGATGCTCAGTGGGAACAGATGATCTCTTGATGAGTGCTTCT
TCAGTTTCATAGTTTGGAAATCGTTCACTGTGTGCTTTTTGGGGGGTTTTCAATGGAAATTCACGTTGCTTTGCAT
TTCTGTGTCCGTCTTTGGTCAGTTGTGCAAGCCTGCTCACTGTGATGTGAAGATGGCCTTTTCATCTGGCTTCTCT
CTCTTAAGTGAGAAAGATTGTCTTTCAGGGGACATGACATCAATAGGTTTCTGGAATGAGGGACTCTTTCTCCCC
GTGTTTTGCTTTGTGTTACATTTTCTTTCTAATGGCATTGAACTTTAAAAAAATGGATTCAACTGTTTTTG
CAGAATGTAGAAAGTATTCTGTGTCTTGGTTAAAGAAATCCACTTGTGAAGTGTGCCTGGAAAATGAAAGTTTG
TGTTTTTTAAAGAGGAATATTTGAACTGCTTTCTATGCAATGCTTAGCTGGAGAAAAGTACAGGCAGGCGTCCCCA
TCTCCCAGCCACTTCTCAAAGGTGCTGCTGTGTTTTAAAGACCAGGTACAGCCAGGGCAGTATTTGCAAGGACAT
TCCTGCTTACTTTATCCCTTTGGTTGGAAAGCTCTAGATGATTCCCGCAGCTCCTCCAGACCCCGCCTCCCTGCC
CTCCCCAGCTGGTCTGGGAAGAGGTGGTCTGCTGACCTGTGGTATCTCAGAGGGGACGTTCTCTCTCTCTCTGT
GCACCAGGTGGGCTGCACCCTCCTGCCTATTACAGGATGTGGATGCCACAGGAGAGCAGCAGGCAGTGGAACTTC
AGTTGCACTGGTTCTCCTGGTGGCAAAGGCATGAAGCACAGGGGTGATTAAATCCAGGCTACTAGAAAGCTCCAG
AGCAAAGTGTGCGGTCCCACAAATGCTTGGCTGGTGGGGTCTGGATCAGTGTGATAGAGTTGGCAGAAGAA
GCAGAGGCACTCTGCTTGTCTTTCTTAGCCAGTCTCTCCCTAACACACAACACAACAACACACAATCTCAGCT
GCGCCATTCTGTGCAATCCAGTGACCAAATCCCTTCCCTTGCCACCTCTATGTGAGCAGGACTGACCACATCAC
TCCCCGAGTTCCCAACCACAGCATTTCCTCCAACCTTTTCCATCACACCAGTTAGAACCCTACAGGCAACAA
GGCCTTCTAGAATCCGCTTAACCCCTTGGCTGATAACAGGCAAATTCAGTCTGCTACACTTTGTTAGGTCCAGAA
GGAGCTGCCCATACTACTTTCTTATGAGCATGCTCAGTATGGCATATGGACATGTAATGTCACATCTTTGTGGAG

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FIGURE 1325B

TGIGATTTTCTTTTTTTACATATTTGTATGCAGTAGAGAGCCTGTTGTAGAAAACGCTCCCTGTATCTTGCTGTA
CTGTIAAAGAAAGCTGAATTCCACATTGCCAACAAAAGCGTGAAAATGTTTCATGAACCTTCCTCCAGGAAAAGCC
ATTCAAGCCTGATTATTTTCTAAGTAACTTCAATTAAATTGAAGAAAAAAGAG

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FIGURE 1326

MLSWRKVQAGVPSPSHFSKVLLCFKDQVQPGQYLQGHSCLLYPFGWKALDDSRSSSRPRLPALPSWSGKRWSADL
WYLRGDVPPPPCAPGGLHPPAYSGCGCHRAAGSGNFSCTGSPGGKGMKHRGLIQATRKLQSKVCGSHKCLAGG
VWISAEIELAEAEALCLLS

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FIGURE 1328

WLSHSPLSLPSVGIIISVSTMPGPNLKCGIQLVSKTYLETLSISL

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FIGURE 1329

CGCTGGCGTTCCGCGCACGCCGGCTCACTGCGCCTGCCCGGCGTGTGGACGCACACGCTCCCGGAAGTGGGAGGT
GGCCGCTGGAGTTTGTGTGGCCGCCGCCGCGGGAACGCGAGCCCGGTAATTTTTCAACGGAGAAAGGCGAGGCTT
TCGGGCTCTGCAGAGTGAGAGTTAGCAAGTGTCCGGCTCCAGCAACTCTCCTCTGGCGTGACAGCCGGCATGGAG
GATCCACAGAGTAAAGAGCCTGCCGGCGAGGCCGTGGCTCCCGCGCTGCTGGAGTCGCCGCGGCCGGAGGGCGGG
GAGGAGCCGCCGCGTCCCAGTCCCAGGAAACTCAACAGTGTAATTTGATGGCCAGGAGACAAAAGGATCCAA
TTCATTACCTCCAGTGCGAGTGACTTCAGTGACCCGGTTTACAAAGAGATTGCCATTACGAATGGCTGTATTAAT
AGAATGAGTAAGGAAGAACTCAGAGCTAAGCTTTCAGAAATCAAGCTTGAACTAGAGGAGTAAAGGATGTTCTA
AAGAAGAGACTGAAAACTATTATAAGAAGCAGAAGCTGATAGCTGAAAGAGAGCAATTTTGCTGACAGTTATTA
TGACTACATTTGTATTATTGACTTTGAAGCCACTTGTGAAGAAGGAAACCCACCGGAGTTTGATACATGAAATAAT
TGAATTTCCGGTTGTATAACTGAATACGCATACTTTAGAAATAGAAGACACGTTTCAGCAGTATGTAAGACCAGA
GATTAACACACAGCTGTCTGATTTCTGCATCAGTCTAACTGGAATTACTCAGGATCAGGTAGACAGAGCTGATAC
CTTCCCTCAGGTACTAAAAAAGTAATTGACTGGATGAATTTGAAGGAATTAGGAACAAAGTATAAATACTCACT
TTTAACAGATGGTTCTTGGGATATGAGTAAGTTCTTGAACATTCACTGTCAACTCAGCAGGCTCAAATACCTCC
TTTTGCGAAAAAGTGGATCAATATTCGGAAGTCATATGGAAATTTTACAAGGTTCTTAGAAGCCAAACCAA
GACAATAATGCTTGAAAAATTAGGAATGGATTATGATGGGCGGCCTCACTGTGGTCTTGATGACTCTAAGAATAT
CGCCCGAATAGCAGTTCGAATGCTTCAGGATGGGTGTGAACCTCGAATCAACGAGAAAATGCATGCAGGACAGCT
AATGAGTGTGTCTCTTCTTACCAATAGAGGGCACTCCACCACCACAAATGCCACATTTTAGAAAGTAAACA
GTTTTGTGTGTGGATCATTCCAATTGAAGTTGCTATGAAGAGGGAGAAGTTTCTGCCTTGGAATTGAAACAAAA
ACACAGGCGTCACAAGCATGTTACCTATTAAGAGAGAGAGGGTATCTCTGAAGACTAATTAAATGGTAATTTT
AAAAAGATGTGACCAGTTGACTTTTAGTATATCATCCCAAGTATTATCCCCAAAATGATAATGCAAAACAGAATA
ATTTGGAGACCAGGAGAAAACTGGTATGATTACTGGGGAGGGGAAGAAGCACAGGTGGTCAAGATAATAATGCA
TGTTTGGCCTCAGCTGTAGTTGCCAAAGAACTACCTGCCTCACAGATGAGCACGCACGGGTGCATTGTCAAAGT
CTGAGAAGGATGTATTGTACTTTGAAGGAAGACTTTCCATTTCTAAGCTACCATGGAGAAGTATATGCTCCTCGA
GACCAGAGACTGTGACTTCTGCATCTTTGATTCCAGCGACATATGATAAAATGTTTTGCACATAGTTGAATCCAG
CGTTGATACATGAAGGACAGCATTACATCTTTTTTTCTATTATACTTAGAAATTTCTCTTTGTTCTGCACCACC
AACCTGTATATCAAGCCTCCTTGCCCCACAAAGCTTCCAAAGCCCGTAAATTTGTTAATCTAGAGCAGGGGTCAG
CAAATAACACCCATGGGCCAAATCTGGCCTGCTGCCTATTTTTGTATGGCCTACAACTATGGTTTTTATATTC
CCTTTTGTAAATGGCTCAAAATAATTTTTGTATAATATGAAAATTACGAAATTTTAGTTTCTCTAAATAAAGTT
TTGGAAAGAAAAAA

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FIGURE 1330

MKLKELGTKYKYSLLTDGSWDMKFLNIQCQLSRLKYPPFAKKWINIRKSYGNFYKVPRSQTKLTIMLEKLGMDY
DGRPHCGLDDSKNIARIAVRMLQDGCELRIKMHAGQLMSVSSSLPIEGTPPPQMPHFRK

[illegible]

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FIGURE 1332A

GGCGGAGCCGCCTCGGACGATAAGGAAATTGAGATTTGGAGAAGTTAAATAACCAAGACTTCACAGACAAAGTCT
CACTCCTTTTGCCAGGCCGGTGTGCATTGGGGTAATCTCGGCTGACTGCAACCTCCGTCCCCTCCGAGTTCAAG
TGATTCTCCTGCCTCAACCTCCCGAGTAGCTGGGATTACAGGCAAAGGCCATGACTACAGTAGTGGTACATGTGGA
CTCCAAAGCTGAGCTCACTACCCTGCTGGAGCAGTGGGAAAAGGAACATGGCAGTGGGCAGGACATGGTACCTAT
CCTTACCAGGATGTCTCAATTGATTGAAAAAGAACTGAAGAGTATCGTAAAGGGGATCCAGACCCATTTGATGA
TCGACATCCTGGTCGAGCTGATCCAGAGTGTATGCTGGGCCACTTGCTGAGAATACTCTTCAAGAATGATGATTT
CATGAATGCACTGGTGAATGCATATGTGATGACAAGCCGAGAGCCCCCTTTAAACACTGCAGCTTGACAGACTCCT
ATTAGACATCATGCCAGGGCTGGAACTGCTGTCTCTTTCAAGAAAAGGAGGGAATTGTCGAGAATCTTTTCAA
ATGGGCCCCGAGAGGCCGATCAACCATTGAGGACATATTCTACTGGACTGTTAGGAGGTGCTATGGAAAATCAAGA
CATTGCTGCCAACTATAGAGATGAAAATTCACAGCTGGTGGCAATAGTGCTTCGAAGACTGAGGGAGCTACAGCT
ACAGGAAGTGGCTTTGCGGCAGGAAAACAAGCGTCCCAGTCCACGGAAGCTCTCTTCTGAACCCCTTTTGCCCTCT
GGATGAGGAGGCTGTGGATATGGACTATGGTGACATGGCTGTAGATGATGCTGAAATTCAGAAGTCAGCACTTCA
GATTATCATCAATTGTGTGTGTGGCCCAGATAACCGAATATCCAGTATTGGTAAATTTATCTCTGGTACTCCTCG
GAGAAAGCTGCCTCAGAACCCTAAAAGCAGTGAGCACACCCTGGCCAAGATGTGGAATGTGGTTCAGTCCAACAA
CGGCATCAAGGTGCTCCTGTCTTACTGTCCATTAAGATGCCCATCACAGATGCAGACCAAATCCGGGGCCCTGGC
CTGCAAAGCCCTAGTGGGCCTGTCTCGCAGTAGCACTGTCCGGCAGATCATCAGTAAACTGCCCTTTTTCAGCAG
CTGCCAGATCCAGCAGCTGATGAAGGAGCCTGTGCTGCAGGACAAGCGCAGTGACCATGTCAAGTTCTGCAAGTA
TGCTGCTGAACCTATTGAACGGGTGTGAGGAAAACCACTTCTCATTGGCACTGATGTTTCCCTAGCACGACTGCA
GAAAGCAGATGTTGTTGCCAGTCAAGGATCTCCTTCCCTGAGAAAGAGCTGCTTTTGTGATACGAAACCATCT
TATTTCTAAAGGGCTTGAGAAACAGCAACCGTGCTGACAAAAGAGGCTGACCTGCCCATGACTGCTGCCTCCCA
TTCTTCTGCCTTTACCCAGTCACTGCTGCTGCTTCTCCTGTCTCTTACCCCGAACCCCTCGTATCGCTAATGG
CATTGCAACTCGTCTGGGCAGCCATGCTGCTGTGGGTGCCCTCTGCGCCTTCTGCCCCTACTGCTCATCCTCAGCC
ACGGCCCCCCCCAGGGTCCGCTAGCTCTGCCCCGGCCATCTTATGCAGGCAACTCCCCTTTGATTGGTAGAATCAG
TTTTATCAGAGAGAGGCCATCACCCCTGCAATGGCAGGAAAATCAGAGTGTTGCGGCAGAAGTCGGACCATGGTGC
CTACAGCCAAAGCCCAGCCATAAAAAAACAGCTGGACAGACATCTTCCTTCCCCACCTACGCTGGACAGTATAAT
CACAGAGTATCTTAGAGAACAACATGCTCGCTGCAAGAATCCAGTTGCCACCTGCCACCTTTCTCCCTCTTTAC
TCCTCACCAATGTCTGAGCCAAAACAGAGGCGGCAAGCGCCAATAAACTTTACGTCAAGGCTAAACCGCAGGGC
ATCATTTCCAAAGTATGGAGGGGTGGATGGCGGATGCTTTGATAGGCACCTTATCTTTAGCAGATTCCGTCTCTAT
TTCAGTGTTCCGGGAAGCCAATGAAGATGAGAGTGCTTACCTGCTGTGCATTCTCAGCACGGGAGCGGTTCTCT
GATGCTTGGCACCTGCACAGGGCAGCTGAAGCTCTATAATGTGTTAGTGGACAGGAGGAGGCCAGCTATAACTG
TCACAACTCAGCCATCACACATCTTGAACCTTCAGGGATGGGTCCCTTGTGCTGACATCTGCTACTTGGAGCCA
GCCTTTGTCTGCACCTTTGGGGAATGAAGTCAGTATTGATATGAAGCATTCTTCACAGAAGATCACTATGTTGA
GTTCAAGTAAAGCACTCCCAGGATCGGGTCATCGGCACAAAAGGAGACATTGCCACATTTATGATATTCAGACTGG
CAACAAGCTGTTGACTCTGTTTAAACCCAGATCTTGCCAACAACTACAAGAGGAAGTGTGCCACCTTTAATCCTAC
AGATGATCTTGTCTTAAATGATGGCGTCTCTGGGATGTCCGCTCTGCACAGGCCATCCACAAGTTTGACAAGTT
CAATATGAACATCAGTGGTGTCTTCCATCCAAATGGACTGGAGGTGATCATTAACTAGATTTGGGACCTTCG
AACTTTTCATCTTTTGCTACTGTTCCCGCTCTGGATCAGTGTCGCGTGGTGTTCATCACACGGGAACAGTGAT
GTATGGAGCTATGTTGCAGGCAGATGATGAAGATGACTTAATGGAAGAGAGGATGAAAAGCCCTTTGGGTCTATC
CTTCCGAACATTTAATGCAACTGACTACAAACCTATAGCAACCATTGATGTGAAACGGAACATCTTTGACCTGTG
TACAGACACCAAAGACTGCTATCTTGCTGTCTATTGAGAATCAAGGCAGCATGGATGCCCTGAACATGGACACAGT
ATGCAGGCTGTATGAAGTGGGCAGGCAGCGTCTGGCAGAGGATGAGGATGAAGAGGAGGACCAGGAAGAGGAAGA
ACAGGAGGAAGAAGATGATGATGAAGATGATGATGACACCGATGATTTAGATGAGCTTGACACTGACCAGTTGCT
GGAGGCGGAGTTGGAGGAGGACGACAATAATGAGAACGCAGGGGAAGATGGGGACAATGACTTCTCTCCCTCTGA
TGAGGAGCTAGCAAACCTTCTAGAGGAGGGAGAGGACGGGGAGGATGAAGACTCTGATGCAGATGAGGAGGTGGA
ACTGATCCTGGGGGACACTGACAGCTCTGACAACCTCTGATTGGAAGATGACATCATCTTATCTCTGAATGAGTG
AGGAGCCATCACTGCTTGAAGAGATTCTTGGCAGGCGAGAACTGAGTCAAATGAATTCAGAACATATTCCCTT
CTCTTTCTCCCAGGGCTGTCTGTCTTTTAAGGAGCTGCATGCCCTGCATTGAGAAGATTATGGCTTAGAGAGCCT
CATTGGCACCCGAGGGTCTTCCAGAATCAATAACCACCACAAAATGACAACAGGGACTAGGCCCTACTCTGCA

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FIGURE 1332B

CCCCCACATCCACCCCCACCATTTCCTAGGATGGACATATCTTTCAAGGGGAAAAAAAAAACCATGTCTCTGGG
GTATTTCACAATATATTTTCTTTGTATAGTGTTCTTTACTTAAAGAACAAGAAATAGTTTTTTATAAACTTTAA
AAAGGAAAAAAAAAACAGGCATTTATAACTGAGGGTATGAACTTATAATCCACCAGGTCTCTTGTCCCTGCACTTCA
TTTTCTTTGGAAGAAAATGATGTCTAAAGAACAATATAGAGGCATTTTTACATACGTATTTAAATGAAAAGGAAA
ATCGTGGTTTCTTAAATTGATAAGGATTAAGAATATTTTATTATAAATATAATATATGATTTTTTAACCTGTTTT
GTTGCCTCATATGCTGTCAGGTAAATTTGTTTTCTTCGTGCCAGAGGTGGGGAGGAAGGCACTCTGTCTGCTGG
GTAAATGCCTAAATTCACCTCACCTTCATGGTTTGGGGGCAGCATGGTCATTGTGGATATTGGTTTTGTGGAGTTG
AGGGAACCTTAGGATATAAGTTCACCTCCCTCTATTTTTCTTTGTGATTCAGTTTTTCAAAAATCTTTTTTCTTCC
CTTCTCCCCATTGTGGAAATTACAAATCAAAGGCCTTTTTCTTTAATGTAAAGTGTATTTATTTAAAAAAAATA
CAAATAAACTACAAGTCTGTCTTTGTTAAA
AAAAA

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FIGURE 1333

MTTVVVHVDSKAELTTLLEQWEKEHSGQDMVPILTRMSQLIEKETEEYRKGDPDFDDRHPGRADPECMLGHLL
RILFKNDDFMNALVNAYVMTSREPPLNNTAACRLLLDIMPGLTAVVFQKEGIVENLFKWAREADQPLR TYSTGL
LGGAMENQDIAANYRDENSQLVAIVLRRRLRELQLQEVALRQENKRPSPRKLSSEPLLPDDEEAVDM DYGDMAVDD
AEIQKSALQIIINCVC GPDNRISSIGKFISGTPRRKLPQNPKSSEHTLAKMWNVVQSNNGIKVLLSLLSIKMPIT
DADQIRALACKALVGLSRSSSTVRQIISKLP LFSSCQIQQLMKEPVLQDKRSDHVKFCKYAAELIERVSGKPLLIG
TDVSLARLQKADVVAQSRISFPEKELLLLIRNHLISKGLGETATVLTKEADLPMTAASHSSAFTPVTAAASPVSL
PRTPRIANGIATRLGSHAAVGASAPSAPTAHPQPRPPQG PLALPGPSYAGNSPLIGRISFIRERPSPCNGRKIRV
LRQKSDHGAYSQSPAIAKKQLDRHLPSPPTLDSIITEYLREQHARCKNPVATCPPFSLFTPHQCPEPKQRRQAPIN
FTSRLNRRASF PKYGGVDGGCFDRHLIFSRFRPISV FREANEDESGFTCCAFSARERFLMLGTCTGQLKLYNVFS
GQEEASYNCHNSAITHLEPSRDGSLLLTSATWSQPLSALWGMKSVFDMKHSFTEDHYVEFSKHSQDRVIGTKGDI
AHYIDIQTGNKLLTLFNPDLANNYKRNCATFNPTDDLVLNDGVLWDVRSQAIAHKFDKFNMNISGVFHPNGLEVI
INTEIWDLRTFHLHTVPA LDQCRVVFNHTGTVMYGAMLQADDEDDLMEERMKS PFGSSFRTFNATDYKPIATID
VKRNIFDLCTDTKDCYLAVIENQGSMDALNMDTVCRLYEVGRQRLAEDEDEEEDQEEEEQEEDDDDDDDTDDL
DELDTDQLLEAELEEDDNNENAGEDGDND FSPSDEELANLLEEGEDGEDESDADEEVELILGDTDSSDNDLED
DIILSLNE

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FIGURE 1334

CACACACACACACACGCCAGGAGCAAGGGAGCTTTCGGGGCCACACTCCCAGACGCCTCCCTGAGCCCTGGAACCC
GGACTCGTTGCTCCTGGCCTTCCATACAACATACGAGCACATCCTGCGGTCCCACCCAGATCCCCCTCCTCCTCG
CCATCCCATTCTGCCCCCTCCCCACCCTGGGTACAGAAAGGGACTGAAGTGTGGGCAGAGAGGGGGCTTAAGGC
CCCTGGGCACAGGCTGGGATCAGGGCAGTCGAGCGAAGGGCAGCTGTGTCTCTGCCCTCCCTTCTGGAGGCTGGAGG
GGAGAGGCCAAGCCCTTGGAAAATGTAGCAAATGTCTGGATGTCTGCATAAGTGCGTGTATGTGCGGGACAGGCCC
CGAGAAGCTAGTGACTCCTGCACACCCCCATTGCACAAATGAAATCACAGCCCAGGAGGGAGGGTAGCTTGGCAC
TGGCTGAGAAATAGAGCTCTCTCCCCGCCCCCTCCCCCTAACCACAAGGGATTGTCTTGACAACTTGTGGGGATAG
AAGGGCTCACAGGGCAGGGGTCTCAGCTGCCCCCATCCTTAGGGCAGGGGAGTTAGTGTGGAGCCGAGAGCAGGT
CCCAGCTCCCCCTGCCAGCCGCACTGTCCCAGGCCCAGGGACCTCTGCCGGGTCTCCAGCCCTTGCCACACAG
CCTAGACGTAGTAGCCTGGGCTTCCAGCAGGTGGCGAGCTGGTTTCGTGTCTGGAATTTCTCCTGGGTTTCTTGGG
GTCAAACATGCCAACCTCCAAGACCCCATCCTCACGTCTCCCACTTTTCTGGCGCTGGAGTGTGCAGGGCGTAGG
ACCTGCATGTGTGGGTGTGAGAATGGGGGCGGTGGACACCAAGGGGCGAGTGTGTGACTAGGTGTGTGTGCACAT
GTGTAGGGTGCAGACGCATGGGTGCCATCCTTTGCGTTTCACTGACTGTGCGTCCAGACCCCTCACCAGCGGCCCC
CCCACCACACCCCTGGTCTCTCCAGGCAGCTGTCCCAGGGCGCCCAGGCCTGCCTTGACCCACAGCCCTCAGGAAA
TCCGGCAAGGAGGCCCCCTGCAGGTTGGTTTCAAGCCCCAGGTAGCAAAACAGAGACAACAGCAGCCCCGCGCTGAC
CCCCCTGCCCCCTCTCTGTGGAGGCCCGGGACCCCCGCAATAAGCACCACATGGGTGAGGCTGTCCCTGTCTAGGGTC
CCCTGCCAGGGTCCCTCCTGGGGTTCTGGGCCATTTGAGGGGCTCTTTGATGGGCCAGGCCGGCCAGAGTGAACCT
CCGAGCACTTTCTGGCTGGTGTCCCAACCTCTCCACTCCCCACTCATTTCCACCTTGAAAAAGGGCTATAGGTCC
CCTGCCCTGCCCCGGTCCAGTTTACAACAGTGTGGGGTGGCCCCAGGGCCTGGCCCCACTCTCCCTGCTGTGCC
CACTCCTCTCCAGACTCCACCTCCCCAGTGGGTATGGGCCCTCCACATGCCAGGTAAGTAGCAAACCCCCACTCC
CTCCAAGGACCAGGTCTCAGAGAAGGCCCTGGTCACTGCCCCCGGCCACCTGGAGCCCATCGGGGCTGCCTCTC
CCAGCCGCGACTTCTCCTTTTGCCTTAGGCCTCGCGACATCCTGATCTCTCCTGCAATAACTAGGAATCGAGATT
CCACAGTAGACGTCCCTTGCCGTGNN
NNNNNNNNNNNNNNNCTCTCTTTCTCTCTCTCCTCTCTCTGTAAAGATCCTGTTTCGGGAGTTTCCCCAGCCGTTG
TAGTATCTAGTATGTTAGAGTTGGGAGGGGACCATAGTTATGTAGCCCAGCCCCCTCATTCCCAGAGGCACCCAG
AGGGCCAGCCTCCAGCCTGACCCACAGAGCAGAACCGGAACACCAGGTGGGGGCCCTGGTGCTGCCACCTCCTCTG
CTGGTCGGGCTGGGACCCCTTTGCCCCCTTAGGAGAGGTGTTGGTCAAGATGTTTACCTCAGTTTATGTCACTGTC
GAAGAAACAAAAATAATAGCAAAAAATAACACTGTAGACATGAAGACTTAGAAGACAAAAAAAAAAAAAATTCAC
ACAAAAAATCTCCCTTGTGCGATTCTTCTGTGAAGGTACAGTGTGTATGTGTGTTGTGTGTATGTGTGTGCGTG
TCTCTGTCCCAGACCCTGTGTCCCCACACTGCCCCCTGTCTTCCGGTGCTTCCCAGAGACCCCTCTGAGCTGGC
CTGTGGGGCACGGGAAGCCCCCTGGATGGGAGGCGGGGCCACAGGTCGGCTAGAGGGTCTCCACCAGGCCCCACTG
AACAGAACCCACGGCTGCCAGAATGTTCCCTGAGCCACACTGTGGCCAGTGGGACAGTCTGGTGGCTGACAT
CAGCGTCCATGCTTGGCTCAGGGCCTGGGGCGGGGTCTGGGTAGAGTCTTAGCCCCAGAGCCCCAGCCCCCTCAT
GTCTTGCCGCCCTTCCCTCATGTGTTTGTAAATACTCTGGCATCCTTTGGCCCTGAGAAGGTTTTTAAATGTGTT
ATTACTTCTCTAAACATGACGATTGCTATAAAAAATAAACAAAAGTTTAGAAAAATGTAAAAA

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FIGURE 1335

THHTPGARELSGHTPRRLPEPWNPDLLLLAFHTTYEHILRSHPRSPPPRHPILPPPHPGYRKGLKCWAERGLKA
PGHRLGSGQ

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FIGURE 1336

CGGACGCGTGGGCAAGTAATTAGAAGTAATCCTTCATTTAACATCCCCACTGGGTGCCTCGAGGTATTTCTGAA
GCCGAATGGTCCCAGGGTGTTTCAGGGAACCTTACGAATTAAGAAATACTTGACTGTGGAGCAAATAATGACCTGT
GTGGCAGACACGTGCAGGCGCTTCTTTGATAGGGGCTATTCTCCAAAGGATGTTGCTGTGCTTGTGTCAGCACC
AAAGAAGTGGAGCACTATAAGTATGAGCTCTTGAAAGCAATGAGGAAGAAAAGGGTGGTGCAGCTCAGTGATGCA
TGTGATATGTTGGGTGATCACATTGTGTTGGACAGTGTTCCGGCGATTCTCAGGCCTGGAAAGGAGCATAGTGTTT
GGGATCCATCCAAGGACAGCTGACCCAGCTATCTTACCCAATGTTCTGATCTGTCTGGCTTCCAGGGCAAACAA
CACCTGTATATTTTTCCGTGGGGTGGCCATTAGGAAGAACTCCAAATCAAAATGCTATGTAAATGTCTATGGGTG
ACAGTCTGCTGATGGTAGAAACCTTTCTTTTAGTTTACAAGTCAGAGATTTGGACGGAGCTGACACAAAGAGTT
TGGAGCTCCCCCATTTCTGGCTCTCCTTTTCAGGGGTTTCCTTCCCCAACCCCTTTTCAGCAGCGGTGGCTGCCCCC
ATTCTGACCCCTGACTCTTCCAGCCAGAAAGATGGTGGTTTTCTAAAGGAACCTTAGCTGTCTGCACAATGCCG
ATCTGTGTCTTGCATTTTGGGTAAAAGCCATAAAAAATAAGAACTCAGCCTGTGGCCTTTCTTTCTTCCAAGGCT
GGGCTTCTTTTTTTAAGTGACTTCATGCAGTTTGTGCTTTTAAAAATTTGTCCAGAATCGTTTTCTGCAGAAGC
ATGGTCTGTTAGGAGCTTACTGGCCGTAGCAGAAGCAATTGTTTCTGAATTCCTTGACATTTATCTTTGCTGTAT
TCATTTAGGGCTTGGGAGAGTCCGAAGATAATTAGTCACTGTGAGATTAATAATTTTGTGAGACAAAGAATAC
CGTTATGATTATTTAATCCTTTAAAAATGTGGTCTCCAGAGCTTGTTCAGAAATGGCCCAGACCAAGCCTTAAT
TGTGATAGTGAATATTAATGGTCACTTTAAGGAGAAATTATAGGCCAAGATGAAATGAACATAAACCTGTTTGCC
CTGGCTTTCAGTGGAAGATGATATTAGAGACCAAATCTGGTTCTGAAGGTGTGTATCAGCCCTAAGGTGAACCA
GACTTGGGAAAGATTGTCTTTAAAAATCAATGAGTTTATGTTTTAACTTCTCAGCTTAGTTCTATGCATTGCTCT
ATAACACACCTAGTTAAGTTTTATGTTATTCTTGAAGTGTGATTTTTTTTCTATTTACTTTTCATGGTTTGGTGGG
CCATTGTTATGGAAGTGAATGTTTGTGTCCACCCTTCACCCCCAAATTCCCGTGTGAGCCCCAACCTGCACTG
TGGAGCTGGGGCTGCTAAGGAAGTAATTAAGGTTACATGAAGTCATGGTGGGGCTCTGATCTGCTAAGGTGGTG
TCCTTATAGGGAGAGACCCAGAGAGCTTGTTCCTCCCTCCCTGTGCATGCAAACAAGAGGGCATGGGAGCACA
CAGAGAGATGGCAGCCACCTACAAGCCAAGAGGAGAAGCCTCACAATCAAACCTCTCGCTGCTGGCGAGAGTCTTG
GACTCTGTCTTGGACTTCCAGCCTCCAGACTGTGAGAAACAAATTTCTGTTGTTTCAGCTTCTCAGTCTCTGGTG
TTTTGTTATTGCAGCCTGAGAACACAGCTGTACGATTATTTGTCAAACAGAAAAACTGATACTTAACAATGCTA
ATGCAATTATTTATTTGCTTTTCAGTCTCTACAAAACGTTCTAAAACACTAATCTAAATATTAACAGTAAATAT
TTGCATAACTAATGGAACTAAGAAATCATATGACCAATATTTCACTTATTGGTAATCTTACTCTACTGATTTCC
CCCCAGACTGTGATTTTTGAACTTCCTTGCCCTTCTCCTGTCTTTCTGTGTTTATTCATGGAATTCAGTTAICT
GGGCTTGAAATTGCAGGCTCTCCTAACTTAAGCAAAATCTGACAGATCAGCAAAATGAGATAAATGTTTCTTTT
TCTTTCTGACTGCATTAAATCAGATACAACCTCAGCATTAAAAAGCTATCTTTGTAAATGTTGTACTAATAAATT
AGTCTTATAAAAAAAAAAAAAAAAAA

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FIGURE 1337

RTRGQVIRSNPSFNIPTGCLVFPFAEWSQGVQGTLRICKYLTVEQIMTCVADTCRRFFDRGYSPKDVAVLVSTA
KEVEHYKYELLKAMRKKRVVQLSDACDMLGDHIVLDSVRRFSGLERSIVFGIHPRTADPAILPNVLICLASRAKQ
HLYIFPWGGH

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FIGURE 1338

GGCAGGAATTTTCGGTAGAACTGGAGTGACCTGTGGAAGCTTTAGAACTCTAACCTGCTGTCTTCGTGCTCTGTG
TGAAGGGGAAGCTGGGGGGTTAGCATGAAGTCTGGCCTTGTGTGCATTGGAGCTTCCAAGGCACCTTGAAATCAT
TCCAGTATATTTGGGAAGAATTGAGTGAATGAGAATGCTCTTCCTTATTCTGGTAGATTTGACTTGTTTATAATT
CTGCACTTTTAGAAGAAAAACAGTGTTAATCTGTAGTTGAAAGAAAGCTTAGTAGATGAGAGAGTTCTAGGCTACT
GTGGCTTTTTTCAGTAGATTTAGATGAGATTATGTGTTTTGAAATGTTTTGTGGGATCCCTTAGAAAGCATCACT
TCAGGGCAGAGACACTCAATATTGCCAGCCAGCTTGGGTTCTAAAGTGATTTAATCAAATTCATGCTCCTGATCT
TTTTTTTCCCCCTTCCTTTGGCTATGAAAACCCAAAGCCCGGAGTGATTGTTTTCTCCTTGCTTTAAGCAGTGAA
GTTATCCTAATGCAAAAGAGCTTAGTAGAAAATGAGTGGTTTACCTTTTTTCTAAAAGTATATTTTCAAGTTTA
TTCTGGAATGTGATGTCTTGGTCCTCTTAAAAGCAGATCAGCCATGACTGAAACTCAAGGCTTAGCTGGTATCTA
TGTTGTGCTACATTAGGTGACTAGAAGCCACTTCTTAGTGTAATCAGCTCCTGTTTCCCTGTGAGCCTTAGTTAT
ATTTAATTCAGTGGCTTTGAGTCAAGGCCGGTTCTAATTGAGGGGACCCAGTGTGCTTCAGTGTTAAGAGTGGG
GCAATGAAGAGTGAACCCCAATGAAGAGTGATCCCAACTTTGGAACTATCTGGTCATTTCATGACCTTAAAAAGC
TGCCATGGTGGTCAAATGGCATGTGTTTGACAAAAATGACCGATGTGTTTAACCAAAGCTTTGAAATGTGATGA
AGCCACCAACATAAGCACTTGCCTAACAGAAATCAGTATTTCTTCTACTTAGAAGGCTTGGGGCCCAGGGTAATG
AGGCACCAGATGAAGATAAGATCTGCATCAAGGAATTAAATTTCCAGTTTGTCTTGGGGTCTTTCTGCTTATG
TTTTTTCCCCCCCCTCTGGTAATAGTCCTCTTCTGAGAATGAAAGGAGGCACAGAAGTTGCGAGAAAGACCCAGT
CCCCAGTCTTTGCCACCATTTGCACCATGGTTGTCTCGGAGTCCCTTCACCTGACCTTTTTAGTCAGCTCAGATCT
TTTTGTAGTTTGAGAATAGACCTATTCAAGAGCTATCAGGGTTAAAAGCTGCACTGACCAAAGCTGTACTTTTAA
AACACAACCCCTGGGCTAGTGATGTCTCTACTTGCTCTATGAGCCTTTTGCCAGCCTCAGAATAGGCGAGGTAAC
CTTGAATTTTCAGGGCCCTGGAACTCTAGCTGAAACCTGCCTTTCCCTAATGCTCACACAAGCACCAGGTACCCTG
AGCTTATACTGAGTCCAGTGGTTCCCTATTTATGTGTGTGTGTATGTGTGTGTGTGAGTAACATGAAACTTGGCA
GTAGCAGAGAGCACTGAAGTTCACATGCAAGTTCTAATCTAAAGTTAAGCAGTCTCTTATTTGTTTCGGGACTCT
GATTGACTCTTTTTCTGATGCTTTTCGGCATGTCTGCAGCCTGTTCTCCTAGCCTGCTGCTTGGAGTCAGGTTGA
GCATCAGTGAGATGAAGACAGTACCTTTTCTCTCACATTGGCAGAATAGCACGCACTAGATGCCTGACCTTGAG
CTCTAGTCTCCCTTTAAATCTTACCTTGGCAGTAACACATTATTCCTCATTCAATAATTTCAATGCTGAAACTG
AACTCTATTACTAATGCCTTCCAATCAGAGTTCTCTGATGGGGATGCCTGTGGGATGGCCCACACCTGGGGGACCT
GGCAGATGGGGTGAGTTGGGTAAGGAAGATGATGCTTAGTTCCTGATAGATGCTACAGATGTAGTTTGGCATTTC
AGTTTTGTCCAGTTTGATTTTCACTGGGGTTTGGAGTCACAGCAAGCTGTGTATGAACTTGTGTTTTGTGGTGAC
ACATTAATAATCAAATTGCTAAAACCTGAATCTGCTTATTCTTCAGCTTCACCTCTGCACTAACCCCTTACCCT
TATGGTACGTCAGGATTTTAACTAGTACTGCTTTGTTGACTTTGGGAAATGGTGCCACTCAAAGCAACTTCCTA
ACTTGAGGAATAACTCCTTTGTAGTTTACTTTCTGGTACTGGTTGGTGCCCTTGATTGGGATACAGCTATATTCT
TAGCTCAAATGTCCTCTTTTTGAGAGCAAAGTAGTTATCCAATGGTGAGACGAGACCCTGACGCTCATAGAGGCC
ATTCCTTCCTGGGTGTCGGACCAGGGCTCTGTGTACAGGGAACCTTCTGGGTGGACTTTGTAAGAATCCAGTTT
CCAAGGTTAGATTCACATCCTTAATCTTGACAGAGACTAGAATTTACAGCTCGCTTTGGAACATATTCCAATTCA
ACCAGTTAAAAATCAGAGGACCAAGTCGTGGGGGAGGGGGCGGTGTTGAGGAGAGGTATTTTTAAAGATCTGGCA
ACTTTTCAGGATTATTTGTGGAGAACTCTAAGGTTAAGATCAGGAAATAAAAGACTGTGTGTGTGGGTGTGTGCG
TGTGTGTGTTCAAGTGCCATAATCTTGTTTACCTATCACTTTAAAAAAATAATTGAAGTGTAAAGCTAAATAAAAT
GCTTGGAGTTTTGCTGGGCTAGTGAGAGTTGGTGCAAATCTTGTTGTGTGTTGCATAGGAAGGTGAGATGACC
ATCTACTAAAGAGGAAGTAGCTAAATACAGATCTGTGGGTGTTTTTAAAAAACTCAACCTATCTGGTGTTTTAT
TTTAATGGATAAAAAATGTAATTTTTCTAAGGTAGCAACTTATTTCCAAATTAATATAGATGAAAAATAGATACCA
ATTAGACTAAATTGAAAGCTTTTGTCTATATTTGCATAGCCTTTGAAATATTTCTTAGTGCTAGGAGGTCTG
GGGATTCCTCTTTTCGTGGTGGTCACTAACCTTACTTGATGCAGATAAAATCACTTGTCATGCAAAATGTGTTAG
AACTTGATAAAGCTTTGAGTTTGAGAAATAAAGGTATATTTAAATTTAAATAAAACTTGTCAATTTATGCTCATT
G

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FIGURE 1339

GRNFGRTGVTCGTALESNLLSSCSV

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FIGURE 1340

CCCACGCGTCCGCCGGGCGCGTTCCGTTGGCGGCGGATTTCGAACGTTTCGGACTGAGGTTTTTCTGCCTGAAGAAG
CGTCATACGGACCGGATTGTTTTCGCTGGCCAGTGTCCCGGAGCTTGTGTGCGATACAGAGAGCACCTCGGAA
GCTGAGGCAGCTGGTACTTGACAGAGAGGATGGCGCTGTCGACCATAGTCTCCAGAGGAAGCAGATAAAGCGGA
AGGCTCCCCGTGGCTTTCTAAAGCGAGTCTTCAAGCGAAAGAAGCCTCAACTTCGTCTGGAGAAAAGTGGTGACT
TATTGGTCCATCTGAACTGTTTACTGTTTGTTCATCGATTAGCAGAAGAGTCCAGGACAAACGCTTGTGCGAGTA
AATGTAGAGTCATTAACAAGGAGCATGTACTGGCCGCAGCAAAGGTAATTCTAAAGAAGAGCAGAGGTTAGAAGT
CAAAGAACATATTCTTGAAAGTTATGATGCATTCTTTGGGTGGTAACAGATCATAAAGACATTTTTTACACATC
AGTTAATATGGGATTATTAAATATTGGCTATAAGTGAAAAAA

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FIGURE 1341

MALSTIVSQRKQIKRKAPRGFLKRVFKRKKPQLRLEKSGDLLVHLNCLLFVHRLAEESRTNACASKCRVINKEHV
LAAAKVILKKSRG

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FIGURE 1342A

GTGGGCCGCGGCGGTGGCGGAGACTGTGGCTTTAAGAGCGTGCCGGGAGCCCGAGCCCCAGCCGGGCCGCGCTTC
GCCGCTGCGCACCCAGCGGAGCCAAGCCCCACGCTGGCCGGACAGGGCCGCTGTGCGCGGGCTGCTGAGAACT
AGCCCTAGACCTCTGCGTGAGGGTTCTTCTGCCGAAGACATCACCAGTGTGTGGAGCCTGCCACACCCACCCGCT
GCCAAACCACGGCCTTTACCTGTGTCTTCCGGTGTTTCCCGTGCGACCCATCCTGTGGGAGTGCCTCGTGGGCTG
CCCCAGAGTTACCCCCACACTCAGCAGCACCAATGGTGAAGATGACAAGATCGAAGACTTTCCAGGCATATCTGC
CCTCCTGCCACCGGACCTACAGCTGCATTCAGTGCAGAGCTCACTTGGCCAATCATGATGAACTAATTTCCAAGT
CATTCCAAGGAAGTCAAGGACGAGCATACCTCTTTAACTCAGTAGTTAATGTGGGCTGTGGGCTGCAGAAGAGC
GAGTGTGTGCTAACAGGACTGCATGCAGTCGCAGACATTTACTGTGAAAACCTGCAAAACCACTCTGGGCTGGAAAT
ACGAACATGCTTTTGAAAGCAGCCAGAAATATAAAGAAGGCAAATACATCATTGAACTAGCACACATGATCAAGG
ACAATGGCTGGGACTGATTGGACAGCATCTACCCAACCCAGTGTCCACGTGAACGCCATTCAACCCGAACATTCTT
CCCAAGCGTGAGAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT
TGACGCCATCTTTCTGGTGACCGGCCCTCTAAATCGCTGTCTCTCTGTCTCTTTGCTTTGTATCTGTTTGTGAGTT
GATCCTGGCTTCTCTCTCTGTCTTAGTTTGGCTGAAAACAAAACAACAAAAGGAACAGATCCTTGACCGCATGG
CGGCAGCCACCTTGGTAAGGGCCCCAGGGCCCCATGCGAGAGCTGCCTGATGGCCTCTTGTGACGAGAGCAGTGG
CACGGGGGCGTGAGGAAGAGGGGAAAGGGGAAACTCTAAGGGTCTGGCGCGGGGAAGGGGTGGAAGGTGGAGGT
AGGAACAAAATTGCGCCGCTCCTGGAGACCTGATAACTTAGGCTTGAAATAATTGACTTGTCTAAAAGGACAAAG
AGAAAAAATAATACCTCATGACTGCATTCTCTCTGACTAGAAGCTTCTGTTTCTGACACCAAATGTGCCAGGTT
AGCAAATGAGCACAAGATGTGGCCCTGATTCTAGTTGGTGGGGCAAGGGCCTGGTTCTCCTGGGCTGAGTGGGGG
AGTGTCTTGGCAGCAGCGAGTGACCTGGGCAGTGGCCAGGTGGGTGCGATGACTCTGATGCCTCACTCAGTCTCT
GGGCAATCATCATCTTTGCCCTTAGCCACCGTAGATAAGGTGTGAAGGGACTGCTGTTTGCAATGGGCTTACCAT
CCAAATATCCCAAAGGCTTTGACCAGCAACCAAGTAAATCAGTAATTGAGGAGAGCAGGGCACAAAGGGGCTGC
AGTTTGGGAGCTCCTGAAGAAATGGCTCAGATATTGAGTCAGAGAAATAAAAAGTAGGATCAGTTAGCAATTCTA
ACTGCCCTTCTCTGACCCCTCATAAGAGGAGTGTGGTGAGGGAGGGGACTGGGTAGGGGTCATCCCAGGAGGA
GGGGTTTACATTGGAACCAAGTTCAGGTTCCGTGCATCTTTCTCTTCGGTTTTACAGTGGCTTCCGTGGGATCGT
CAATTTCTTGTCTTAGAGTTTCGGGTGTTTTTCTCCAGTCTTGTTACTGTAGACTGTAGAAAGCACGGGCCCCA
GGCTCTGAGCTTAGTAATAACCTGGCTGGTAGATTCTCATGCCCTAATTGTCCCACTTAGGCCTGAATGTCTT
GCATGGAGAGAAATCTCCTGTCAGTGTGGTCCAGCAGCAGGGAGGAGTTCTGCCCAAATTCGATATCACCCCTT
CCCCCATCCAAACATCCTTCGATTAGGGAAGTGGAGAGCACATCCCTGTAAGGCCATAAGAGAAAGAGGAGTTT
GTTACATTTAATCAACACTGTGAAGTCTGTTCTACAGCAATTACGCCATTACACAGTATATGACTGAACTCATT
TAACTGGGTAAATTTCAATTTCTTAGACTGAATATATTATTGTTAAGATACGTGTGCGTGTTAGGTAATTTCTCAGC
ATCTCCTCCAAGTAGGCCGACCTTCTCGGAAAATTACCCCTAAAAGTCTCACAAAAGAATGAGTTTATGGGGAGA
TTCTGTAAAGTGATGAACTGAGATGAAAGCAGCCAACAGCCAGGAGCTTTTCAGAATAGCGTCTGCAGCAGAAC
CAGTTTCCATTACAGAGCGCGTCTTGGTGGAAATGCTTTTTTGTGTGTCTCCACGCGCTGATGGTGGAAATGGGAG
CCCCAAGACGTGTGGGCTTAGAAATCAACTTTTGTTCCCAAGGCTTCTTGTCCAGATCTTTCCAGTGCTTTTCT
AGCCCTGGGAGATCAAGTTGTTCTCCCCACTTTACTGCAAGGTAGACTGAAAGTTTCAAGAAATACTGAATTTCT
GCTCCCAGAAGAATAGTTTCTCTGGCTCACAGGCCCAAGTTCTCAATGAAATCGTTTTTTAACTTTACATTCTCT
AAGCTGGCTTCCCGTGACAGAAAGCCATGGATTTCCCTCTCTCCCTTCCCCCTCCTCAAGGAAATAGTCTTCTCT
TTATGGATTTTCAATTGGACTCTTTCTCTCAGCGATTGTCTGGCTGTTTATTGATAGTCTTCCCATAGAAAATG
GGGTTAAACATGGGGTAGGTATTTTGTCTTTCAAACATACAAATGGAATGTGGTGACATAAACTAGACATGGGGTG
CCCTCAAGTTTCCAAGGGGACCAATGTGCCACTGTTCTTCTTGGGGATGAGGCCTTTGACTGTTGGATGGATCA
GAGCAGGCTCCAGTCAGACCTGGTTCTGAATGTTTTTTTTTTCGGTGACTATCCAGTGAGCCTTCAGTGGGTGC
AAGGCGCCATACTTGCTGTGAGAGAGCTGAGTAGAGTGTGGTTTTTCCATAACTACAGGGGGAAAAAAGTCAT
TAGGCTTTCCCTTTGTGTGAGTGAACCAAAAGTGTCTTACAACGTTGCTCTGTTCATGGGTGTCTATCTA
ACATTGAGCAGCATTGGAGAGGCCACAGCTGAGCTATGGAGATGCTAAATTAACCTCATGGCCTCAGTCAGTTTCT
TCTTTAATTTCTCACCAAATTATTGACTTAGAGCATAACCAAAGACCTCATTCAATCACCCAGGTGGGTGGG
GGAATTGGAGTTTGTGGTGAAGTTTGGGGGCGGGGTGTGGGGAGTAGAGACAGGGTAAGGGGACGTGAGAAAGG
AAAAGGCATGAAGTTCTATACCTCAGCCAGCAGCTGCCTTCGTTTGGAACTGAAGTCCAGCCAGCAGACTCTCTA
GCTCCATCTCCCTGTGCCACCCTAGGTCATATGACCTTGGCCACCTTGGAGTAGACCCAGACCCCTCGGGACCC

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FIGURE 1342B

GGGACATTAGTCTCAGGCTGCTGATGGATTGATTTGACATGAACCAAACACAGCCAAACTCGATACCCACAAGCT
GTCAGCTGAACCTGACTGAGTGTTCTTCCTGAGTTCACGAGGATAGGCTAGAGTGCATTTTTACTGGTGGATCAG
TGTGTGCGAAAGAGATGACCCTTTATAAAGAGATTTTCAAGTGGATATATATAAAAGAAACAGTTGCTTGAAAA
TATACTTTTGTAATAATATTTAATTTTTTAAATAATATATTTGGTGCTGTTTTCTCAGATCCCCTGAGAGCACT
TTTTATTTTCCTTTTAAATTCTATGGTTTCCTTTGCATTTCTTGAAGTATATTTTAAGGGAAACAGTGATCACCA
ATACATGTTTTCAGTTTTTTTTTTTTTAAGGTCCTCTATCACTTTAATCTGGATCAAGGCTTTGAAGCAATGCCTCT
CTGCATTTTTTCCCAGTGGAACAGACTCTGCAGTACATTAATCAGGTTGAGAATTGAAATATTTCTTGCACTCA
GTATTGGCTAGAAAAGAAAATAAAATAAACCAAGTTAATTTAGTAGTAACAACCTTACAGTGATTCTTCCTGTTGG
AAGAATTTGCAACAAATCAGAATCACGTTTTTAGTTGTGCGTGTGCGCGCACACGTGTGTAAGCACTTTTCGA
TTGTGCCTCCTGTTTTCTCGAGTGGGGACACTTTAACTACAGTTTACACCTCGGGCGCATAAAGTTTTTCTTCTC
TTTCTCTCTGGTTGTTTCTGTTTCTGAGTGGACCAACAGCAGAACCCACGAGGATTTGTTTTGAGTATGGAGCTG
TTGCGGGTTTGCTCCTTTTTCTTGCTTTGCGTGCTCAGTTTTTACAGACTGTAAAGGAGATGTGTTGTTTGTGAA
GATGGAGCAGAGTCAAATCTGTGCTTCTAACTGAGATGAGAGTGTATTAATCACGTATCGCAGGGCTCCAGCTGT
TTTAGAAGCCACATCATGTTAAACATTAAGTGGTTTGATTAAAGAACATTAATATTATAATACACATATCTTA
GTGGTAAACAGCTTTTTTTTTTTTAAAGGTCAGATTGCCTCAGGTTTAGAAAGAGGCTGAGAAATCAAATCTTGAAC
ACAATCAACTTACATATTTTAAAGGAATCTGCCTCAAATGAGAAAATATGCTAGTTATCTAGATAGAGGAAAGAG
ATATTTACTTTTTTAAAAATTAAAAATAGTTATGAAATCTGGCAGAAAAGGTAAAGCCTAGAAGAACTATGAAAG
CTATTCTCATGTTACCAAATCTATCTGCGCATATGTTTTTGTATAACATTTCCGGTGACAGTGGGAGTCGGTTCC
CTTTCCCAACCTGCAGAGACTATCTTCCAATACAGAATCTGTCTATTTATGCTTGTGTTTACAACTGTATTTGT
TGGGTTTGGGTTTTTGTCTTTGTTGGTGGCATTTTTCAGGTCACCTTTGCTTCTATAACAAAGGTAATTGTTTTCA
AATAATTTGTCTTCACCTTTTCTGTATTTGTACATAGTGATTTCAGTATTAGAGAAAAGTGCATTGTTTCTGTCA
TATTTCCAATCTGTGTTGGTGCTCATTTGAGAAAATAAAAGTTTTCAATATTACAAAAAATCTATGTCGGGTG
CGGAGAAAGAGGTAATGAAATGGCAGG

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FIGURE 1343

VGRGGGGDCGFKSVPGARAPAGPRFAAAHPGAKPHAGRTGPPVAGLLRTSPRPLREGSSAEDITSVWSLPHPPA
AKPRPLPVSSGVSRATHFVGVPRLPQSSPHTQQHQW

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FIGURE 1344A

AAAAGAGACATTGTAATGAGGCACACCACTAAAGTGAGCATGCCCAATTAAAACCAGTGTAATATAGGATAAGAA
AATCTGATTTTTTCAAAAAAGATACTCTACATAAAGAATCCTTCATATAAAAAAGTTCTTTCTTGTAGTACATTTAA
AGTTTTAATTCACATCATGTATAACTGAGAGTTCCTTTGAGCCCTTTTATAGGCAGGGAGGCATGTCTGTCTATCTAG
CGTGTGGCCAGTAAGTGATTATTACATTGGAATCAGTTTTTTCAGTCTTTTAAAAATAAATCTATGCCATAAGAA
TAAAAGATAAAGAGCAAAATTAATGTTAACTATTTTATAGCTTATTATAACTATGTCAACAAGTGTTTATTAAATAC
CTATTATGGGAAAGTCACTGTGGTTGGCATTGAAAATTACATCATCTTTAAAGCAGTATTTGTCCCCAGATGGAC
TCATCACTAGCAAAGACTAGGTTTCATTGGAAGGCATAGGGTGAGAGAATGGGAAGATGGAGTGRAGGCGGGTTGT
TAAAGTGCTGTCTAGTGAGTGATTTTGTCTACTTGAATAATGGTCCATGTTTGGGGGCATATTGTGTTTCATAAGA
AGTGAAAGGTATTTGCAAAGTAAGCTACAAATGACCCATAAATCTGTTAAACAACAGTCCTTAATATGCAAAGATG
AAAACCAAGCATTACTGCTACCCAAAGGGAACCTGGTGCTTGGTGATGTGCAGATGGGGCTGTTGGTTAAGAGAGC
TATTACAGGTTTTCTCTCTTAGGTTTCATAGGAGGTAGTTACTGAGATGAGATTGTTTTATCTTTTTGAATACAG
ATCTCTTGTCTTGAGTTAGTTCTGAGGATGGGAGTAATAAAGGAGTTTTTGTTTTTTGTGTTGTTGTTGTTT
TGGCTCCTTAGTAATACTCCTCTGACATTTATTTCTATTATTCTTCAAAGAAAGGAAACCAACTGAAATGTTTGC
TTTAACAAACATTTTAATAAGTTCTCTGGGTTTTTTTTTCCCTTTTAAAAAAATTAGCATATACCATAGCAATA
AAAGAACTAATGTTAACTATTGTATGCTACAACCTTAAGTGATTTTTCTAAAGAAGCACAATGTCATTGAAAGTAT
TATTGAAAAGGATCATAGTCACATTGAATTTGTGAAGGCCAAAGAAATTGAAGGGAGTGATATTTTCATTTTATG
ATATTCACATTAGTAAATTTTGTGTACAAGAATACCAGGCAGAGTGTTTTACCCATGGAAACAGGTTTCAGATTA
CTTTGTTTTTACTGTTAGAGTCTCAAGTTTAGAAATGCTAACACTTAAATCAGTTTTTTCTCACTATACTTGAA
GATTGTTAATATTTTGATATCTTCTAGCTTGATGAATTTAAACATATCTTCAGATCTGTGACAGTGACAGCCAA
TAGGACTGATAATATTAGCTTCAAACCAATAATATCCAGGGTTAAATAAAAAATCATAGTGAAAGTACGATTGTA
AAATTATGCTATATTAACTTTTAAGTCTGTAATAACTTGACATCAAAATGTTATGTAATTACCATAAATAATGGC
TAGCGAGAACATCTTTGGAATTTCTCAAATTACCTTTCTTACTACACTGTTTGCAGAATGAATGTAGAAATGATC
CTGTTAGCTTTCTGAATGTTCTGTGGGTTGAATGTGTTTTTGTCTAAATAAAGCTTTTGGTATTTGTTTAAATTA
CACTTCTTGAGAAGTGGAATTTTAGGATCATCTTTGCTTTGTTTCAGTTTTTGTGATTTTTGAAATGAATGTTTA
GTTTACTGAGCCAGTTGGTCATTTCTTCTCATGTCTGTTAAGTCCAGTGAGTAAGCCTGAACGTGTGAATAAATTA
CCAAAACTTGCTTAGAATTTTCATTTTGAAGCAATTTGCTAATATTTGAAGTGATACACATTTGTAGTTATGTT
AAAAATTGTATTGTACTAAGAATGTAATCAATGTCTACTTTAGTTGTAAACATTTCTGATGTCAAACCTTTTATTC
ATTACTGTTGATTTTAAGAATAAGAAATCACTGCCTAAATATTACCAAAAGCCACTGTCTCTACCCGAACCTCCC
AGTTTGGGAAAGAATCGTTAGATAAAACAAAGGCTCTGCCCTTTCTGATACCAAACTCCACAGATACCTTCTCAC
ATCTTTTAAACATTTTGCAATAACATATTGTTTATAGGAAGTTTACAGGGTATGCAATGATTAAACCTTTTAAAG
TGAATTGATAGTTGCAAAAGAAAGGATAATATTTAAGGTCAGTGAGTAGCAAGACAATCTAAAGTTTCTGTAATA
TCTGGCTCTCTGTTAATTATAGAGCAAAGTTTCCCTTACAGAATCCTTTTATGAACAGCAAGCTAGAGTCTATCC
CTAGTGGTTATAGCACCTGCTGCGTTTTTTCAGGAGACAGTTAGGCCAGGGTGATTGAAATGGATAGATGTGCTGT
TTTGCTGCTTGTAGAATTCAGCCCAGTCTTTGGTCTCTCTCTCTCTCTCCCTCCTCCACCTCTCCCTCTCTCTT
CTTCTGCACCAGAGCCTAAGGCTGCGCCACCAAGATGCGTCATTTTTTCCAGAGGCTTCTTTTTTTTTTTTTTG
AGATGGAGTTTTGCTCTGTTGCCAGGCTGGCATGCAGTGCTGCAATCTTGGCTGACTGCAACTTCCACCTCCCG
TGTTACACAGAGTCTTTTGCTCAGCTCTGGATTAGCTGGGATTACAGGCACGTGCCACCATGCCTAGCTAATT
TTTGTGTTTTTATAGTAGAGACGGGTTTCACCATGTTGGCCAGGCTAGTCTCAAACCTGACCTTAAGTGATCTG
CCCGCTTGGCTCCCAAAGTGCTGGGATTACAGGCATGAGTACCGTGTCTGCCCAGACATATCAAATTTGAC
AGGTATTGTATACCTTTGGATCTTTAGGAATTAATTTTTGCTCTGTCACTCAGCTTTGTATATTTTGAATGG
AGATAAGTATAGGGAGGCTTTGGAAGGAAAATTGCCAGAATTCCCAAACCATGTAACACTCATTGAGAATTCAG
ATCCATTATATCTAAAGGGCAAGTGAAGGAAACAGTATTGTGAAGTGGGTATAACTCCTTGGTTCTTAACTAGTA
CATTCTTAATCTGTGAGACCCAAAGGTTGATAAACAATAATTTAAGATTGTACAGTACTCTAAACGTCTGCAAG
GTCTAGATGTTATCAGTATCACTAGTTTTTTATTTCTGCCAGTAGCTCCCTTTTAGGTTACATTGTTGTCTCTTT
CCAGTGTGGCATCTGTCAATTGGTTTTTCACTATGGCAAGTTCATTAAAAAGCTTGCTCCATTGTTATCTTCAAGT
AATGCCCATAAGGAGATGGAAGATATCTGAGACAATTAAGGCTTTAGCTTCTAGGCAAGAGAAATAACGTTGCAT
TAAATTTCAAGTTTTCTTCTGTAGACTTGAATGTGTCTAGCCACTCTAATTTATGGGGCTTTTGGTTTTTTCC
TATTGTACTTTGTATGTAGAAATTGTTTTGAAATATCAAGCATATTTACTTTGAATTTGAACTCTTCTTAATTTT

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FIGURE 1344B

GTATTATCCTTTGAATAAAATGTAAATCCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1345

MCLATLIYGGFWFFPIVLCM

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FIGURE 1346

GGTTGGTGTGTTTGGCATTCTTTCTTTTAAAGAAAATGTTTTCAGGAAACATGAACAAACATACTG
CCAATTATAGTGGGGCTGGGAAGGCACAGGAGCTGGCGACCTCTCAGCTGCATAGTTGGGACGGCAAACCTGCT
GTGAGCTTCTCAGACTTTTACCTACTTCACCTATTAAGGAAGCCATGAGGAGTTGTAAACTCTTGTTTCAGGGAAG
AAAAGAGGGCAGGAGGAAGTAACCAATGCCTTTAAATACAAAACAGATGAAAAACAAAATACTCATTTTTCTTT
TTCTATTGTGGGTTTGGGGAGCCAAACCAAGTGTGACTGTGAGCACGTTCACTGAGAGGCATGACAACATTATTG
AAGAGGTCTTTCCATTATGTCTGGTTCTCTTATTTTCTTAAGTCAAGCCTTAACATGAACATACTTTAAGATGA
TACGGGTCTGTACCATAAACCTGTAAAAGGGCATCGACAGCTTTTCAGATAATCCAGGAATGTTGAGACATGGC
TAAGTTTCTAGCTGATACTTAGTCATTCCCTCTTGATATTGTTGGGATGGGTAGCCAAAAGGCAGGCTTGTGGGA
GTTAAGAGCCAATGATACCTGGAAACATGGGAGGTAGCTGGGGGTACAAGTGGATGTTGAGACTGAAGGAAGAGG
TGGAAAGAAGACACAGAAGGCACCCAGATGCCAAAAGGCCTGGCATGAATGAGAGTTGGCATCTGTCTGTGTG
GTGTTCCCATCTTGCCATACCCATTTGCCAGATTGTTCTGATTCTCATGTTCAATTGACTATCCACATGAGA
CTACAGTTTATAGGCAGTGAGGAATTGTTTCTTCTGGGAAATGTCTTCCAGCAACTTCAGAGGAATGGGAAAG
TGTTAATCTTACGTGAAGCAAAGGAGCCTGGACTAGGGGCAGAGAGAAAGAAGCAGCAGCCCACCTTCTTTGTGT
TTGCACATGTGCCTATGTGCTGTACATTGGTACCTGACTGTGGCTCAGATCTGCGTCGCAGCAGCGAGAGAAGAA
ATCACTCCATATCCGATGAGAGGAAGGGTGGCAGAGAGATGGTGTCTACAATTAGAGACATTTCTGACTCCACCT
TAGCCTAAGCAAACCTTTATATACTGAGTAACATTTGAAGGTTGTCTTTAATGGTGGGGGGTGTTTTTCTCTTT
TAACTACAGTGCTTGCACAAGAGAGGGAGGGACTCAGAAAAGGTTAGGGCAGGTGAGGGAGACAGTAGATGGCC
TGGGATGACTTGAGTCCATCATACTATTGCTTGGCAGGTGTCTCCCCCATGTTTGATTCAAATTCATGAGTGA
CCTACCTTTCCCCAGGAATGGGACTGAGAGGGTAGTCTCCAGCAACTCAGTCTGCACAGGGCTCCCCGTTCAGGC
TGCTTTTGGTGGTTGTGCTTTTGTAAAGTTTCTTCTGCACTTCGACTTACCTCTGAATCAGAAAGCAAGCCCCA
GCAGGTGAATGAGGGATGTCTGCTTGGCATTGCCAATCTAACCAGGGAGGCTGGCTGGCCACCCACTGTCCGCT
AGAGGGGAGAGCTAGCAGGTGTTGGTATGAACTCAGGAATAGAAACACGAGGCCTTTTTAATACGAGGGAGAAG
AATCCATGATGCATACCTGTAAACCCCTAGAACCAAGTGCCAGAATTCCTAGATGCTGCTTCTGTTTGAACAAA
ATGTCAGTGTCTTTACACTTGAAAAAACACACTCGAAAAATGTTCAACTCCATGAAAAATATTTTTTGGCTTTA
AGAAATTGTTTGGTGTTTAACTGTTTCTTTGATTGCCATTCCACCAGTAAATTGTTGGTTGATTTGCACTGCAC
TCTGGGGTTGGGGTTGGGAGGGGAGGGTCCTTATACAGAGCCGAACCTGGGGTTGCTCAGGAAGTGGGCCAGGGA
ATGTGGAAGTCGTTGACATTGCCTGGGCCAAAAGAGTGGGAGATAGTTTTTCTCCCCTCAGCCCACTCCTGGTAG
CACCTGTCGCCAGCCTGGTACAAAGCCAGGCCTTTTTCTTCTGTGAGCATCTCATCACTGTCCAGCAGCAGGTGG
AAAAAGGGGGACAACAACCAGACCTATTTTTTCTCCCCATTTTTTCCAAATTTTGCTGTGCCAAATGTTTAAAA
TTTTATAAATATGAATCTATTGAAATTTCTTAAATCAAGAGCTTCTTCGTGTAAAGTTTGCTTTTTTAGCTATAG
AAAAAGAAAAACAGTAAATATCTCTTAATGGCATCCAGCCTTGCTGAGCTCACCTTTTTTCTGAAGAATGGGTAG
GAGTGAATATTTAATGTAAACATTTACCAAGTCCCTTTACCCTAATTTTGAAGCTGCATTAAACCAACTCAC
TAACACAGGGAATGATTGCACCTAGTCTCTGTGGGCCAAGAACTTTCAGAAGCATTAAAAAATAGTTGAAG
TATATCACTTCTCACCAAGTGGGTAGAGTCAGTTGGCTGTTTGTCCCTGTTTTTTATTTATCCATAATTATGT
TTGTGCTTTTTGTTTTGTAAACAGTAATGGAACGTACATTTTTTATTTGTTTAGAAGACAACCTTTGATTCAATCT
TTCAAGAACTGTTCCATTCTTGTTTTCTTCTTAGGGGGATAAAAAGTTACCAGTTAATTTGTTTTGAGATATTTA
AGCATTCTTTGAGTTATAGAATTGTGATGCAGGGATTTGTGAATGAGACATTTACATGTGAAAGGTGACTTCACT
AGTTACCTGCTTGAGCAGAGTAAAGTGTGTATATGTACATAAAATGTAAGTAATCTTAACCTCATTGTGCAGTGC
CTTTTAGATGTTCCGCTTTCTATAAAGTCTTCAAATTTTTGCATATATATTATATATATATGATGTAATGTTATA
GAAATATATGTATAATATACATATTTTTTCCAGGGGTATCTGATAGCTCTGTATTTTGTATGGAAGTTGAAAGA
AAAAAGTATTTTACCTCAGAAATTAAATAAAAAAATACTTTTAAGTATAAAAAAATAATAGCGCCGCTCGTGA
T

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FIGURE 1347

LVLFGIFFFSFLKKMFSGNMNKHTANYSGAGKAQELATSQLHSWDGKPCCELLRLFTYFTY

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FIGURE 1348

ACTCGGCCGGGCAGCCGCGGGCCGAGCGCAGCCGCCTCCGCCACCGATGCGCCTGGTGGCCAGACTCCAAGTGGG
ACCGGCGGACACGCAGCCTCGCGTGTGTCAGGGGAAGCTGATGGAGAATCGAGCTCTGGATCCAGGGACTCGGGACT
CCTATGGTGCCACCAGCCACCTCCCCAACAAGGGGGCCCTGGCGAAGGTCAAGAACAACCTCAAAGACTTGATGT
CCAAACTGACGGAGGGCCAGTATGTGCTGTGCCGGTGGACAGATGGCCTGTACTACCTCGGGAAGATCAAGAGGG
TCAGCAGCTCTAAGCAAAGCTGCCTCGTGACTTTTCGAAGATAATTCCAAATACTGGGTCCCTATGGAAGGACATAC
AGCATGCCGGTGTTCAGGAGAGGAGGCCAAGTGCAACATCTGCCTAGGGAAGACATCAGGGCCGCTGAATGAGA
TCCTCATCTGCGGGAAGTGTGGCCTGGGTTACCACCAGCAGTGCCACATCCCATAGCGGGCAGTGCTGACCAGC
CCCTGCTCACACCTTGTTCTGCCGACGCTGCATCTTCGCACTGGCTGTGCGGGTGAGCCTTCCATCCTCCCCAG
TCCCTGCCTCTCCTGCCTCCTCCAGTGGGGCAGACCAGAGACTCCCATCACAGAGTCTGAGCTCCAAGCAGAAGG
GCCACACCTGGGCTTTGGAGACAGATAGCGCCTCTGCCACTGTCCTTGGCCAGGATTTGTAGACTCCCTGAGCCT
CAGTTTCCTCAACTGTAAAGTGGAGATGGGTTTGGTGTGCGGAATAACGGGACCAATAAATGATGCTTTACTATT
AAAAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1349

MENRALDPGTRDSYGATSHLPNKGALAKVKNNFKDLMSKLTEGQYVLCRWDGLYYLGKIKRVSSSKQSCLVTFE
DNSKYWVLWKDIQHAGVPGEKPKCNICLGKTSGLNEILICGKCGLYHQCHIPAGSADQPLLTPWFCRRCIF
ALAVRVSLPSSPVPASPASSSGADQRLPSQSLSSKQKGHTWALETDSASATVLGQDL

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FIGURE 1350

GCCGAAGCCGCGTCCTGCTCTCCCGCGTGGGCTTCTCTAATTCCATTGTTTTTTTTTAGATTCTCTCGGGCCTAG
CCGTCCTTGGAACCCGATATTCGGGCTGGGCGGTTCCGCGGCCTGGGCCTAGGGGCTTAACAGTAGCAACAGATG
CGTCGGCGGGCGGCAGTAGCTGTTAGTTGCAGCAGCAATCTCTTCCCGAACACGAGCACCACAGGCGCCCGAAGGC
CGGAACAGGCGTTTAGAGAAAATGGCAGACGATATTGATATTGAAGCAATGCTTGAGGCTCCTTACAAGAAGGTG
AGAAAAACATGTCGGTGAGGTTTATATATTTCTTAATTTAGCATTATTCACGAACTACTGCTGAAATGTAAAC
TAACCTCCCCGGAGCCCTCTTGATTTATCTTATCAGAGATGCATTACGTGTAACCTACAAAAGTAAATATATGCT
ATTGATGTAATAATATTGTGCAGTAGTTTCACTTCAGCGTGATGAATAAATGCCCATCTATCTCTCTTTGTAGAC
TTGCCTAACGATATCTCACCTCTACTCCCATGAATTCACCTTTGATTCCAGTGTGAACGTCAATCATAAGGTAG
TAATTGAGTGACTTATCGCTGTACCGTGGTCCCCTAGGTAAAATGACTCAACTAAGAATTACCACCTCCAGTTTG
GTATAGCAAAAAGGTGAATGTAGTGGTTTGGGAAAAAGCAGGGGTCCAAGAATAACAAAGCATGACCAGTCTGTG
GCAAGTTAAATCTTCTAATAGTCTTATAAGAAGAAATGGGTGAGATTTTAAAATTTATGTATCTATGTAAGACTG
GTGATAGTAAATCTTAAACAGTCCAGTGGCAATCTGCTGCTCAGTTAATAATTACTAAAATTCTTGGATCCCTG
AATAGAAATTAAAAAATAACAAGAGGCAGTAGAGTCAATACAAGCTTAATACAAGCTTAGAGTAAATACAA
GCTTAGAGTCACTTGATGACTGTTTTACT

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FIGURE 1351

PKPPSCSPAWASLIPLFFLDLGLGPSRPWNPIFGLGGSAAWA

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FIGURE 1352A

TTAGAGGTCCTTTCTGCTTTATAACATTAGGTTCTTCTTGTGAGGCCTTAAGCATTGCTAAACAGGTTCAAGTA
AGTTTAGTAAAGTTTCATTACTGCCATTGATTCAATTATCAAAGTCTTTTGTACATATAAAGAATTCTTCAGAT
GCATGGTTTCTATTAAACAAGATCCAATGCCTTCCTTTTATTTCCCTTCAGTTCAACATCTAATATATAAAGATT
GCTCTGACTACTACGCAATAGGCAAAAGAAGCAGTGAGACCTACAGAGTTACACCTGATCCCAAAAATAGTAGCT
TTGAAGTTTACTGTGACATGGAGACCATGGGGGGAGGCTGGACAGTGCTGCAGGCACGTCTCGATGGGAGCACCA
ACTTCACCAGAACATGGCAAGACTACAAAGCAGGCTTTGGAAACCTCAGAAGGGAATTTTGGCTGGGGAACGATA
AAATTCATCTTCTGACCAAGAGTAAGGAAATGATTCTGAGAATAGATCTTGAAGACTTTAATGGTGTGCAACTAT
ATGCCTTGTATGATCAGTTTTATGTGGCTAATGAGTTTCTCAAATATCGTTTACACGTTGGTAACTATAATGGCA
CAGCTGGAGATGCATTACGTTTCAACAAACATTACAACCACGATCTGAAGTTTTTACCACCTCCAGATAAAGACA
ATGATCGATATCCTTCTGGGAACTGTGGGCTGTACTACAGTTTCAGGCTGGTGGTTTGTATGCATGTCTTTCTGCAA
ACTTAAATGGCAAAATATTATCACCAAAAATACAGAGGTGTCCGTAATGGGATTTTCTGGGGTACCTGGCCTGGTG
TAAGTGAGGCACACCTTGGTGGCTACAAGTCCTCCTTCAAAGAGGCTAAGATGATGATCAGACCCAAGCACTTTA
AGCCATAAAATCACTCTGTTCATTCCCTCCAGGTATTCGTTATCTAATAGGGCAATTAATTCCTTCAGCACTTTAGA
ATATGCCTTGTTCATATTTTTCATAGCTAAAAATGATGTCTGACGGCTAGGTTCTTATGCTACACAGCATTG
AAATAAAGCTGAAAAACAATGCATTTTAAAGGAGTCCTTTGTTGTTATGCTGTTATCCAATGAACACTTGCAAGC
AATTAGCAATATTGAGAATTATACATTAGATTTACAATTCTTTAATTTCTATTGAACTTTTTCTATTGCTTGT
ATTACTTGCTGTATTTAAAAATAATTGTTGGCTGGGTGTGGTAGCTCACGCCTGTAATCCCAGCACTTTGGAAT
GTCAAGGCAGGCAGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAAACATGTGAAACGCTGTCTCTATT
AAAAATACAAAAATTAGCCGGGCATGGTGGTACATGCCTGTAATCCTAGCTACTTGGGAGGCTGAGGCAGGAGAA
TCGCTTGAACCTGAGAGGAAGAGGTTGCAGTGAGCCAAGACTGAGCCACTGCCTCCAGCATGGGTGACAGAGAA
AACTCTGTCTCAACAAAAAAATAATAAAATTTATTAGTAGGCTGGATTCTACACAAAGTAATCTGTATTTGGG
CCATGATTTAAGCACATCTGAAGGTATATCACTCTTTTTCAGGCTATAATTATTGGGTAATCTTCATTCTGAGAC
AACTTAATCTATATCATTTACTTTGCAACAGAACAAACCTACAGCATTTTGGTTCCCAGACTAAGGGAACATAAT
ATCTATATAATTAACCTTGTTCATTTATCATTATGAAATATAAAATACTTGTCAATTTAAACCGTTTAAAAATGT
GGTAGCATAATGTCACCCCAAAAAGCATTTCAGAAAGCAATGTAACGTGTAAGACCAGGGTTTTAAAGGTAATTCAT
TTATAGTTTATAACTCCTTAGATGTTTGATGTTGAAAACCTGCTTTAACATGAAAATTATCTTCTCTGCTCTGTG
TGAACAATAGCTTTTAAATTTAAGATTGCTCACTACTGTACTAGACTACTGGTAGGTTTTTTTTGGGGGGGGTGGGT
AGGGATATGTGGGTAATGAAGCAATTTACTTACAGGCTATCATACTCTGAGGCCAATTTTATCTCCAAAGCAATAA
TATCATTAAGTGATTCACTTCATAGAAGGCTAAGTTTCTCTAGGACAGATAGAAAACATGAATTTTGAAATATAT
AGAACAGTAGTTAAATACTATATATTTCAACCCCTGGCTGGTAGATTGCTTATTTTACTATCAGAACTAAAAAGA
TAGATTTTTTACCCAAACAGAAGTATCTGTAATTTTTTATAATTCATCAATTCCTGGAATGCTATATATAATTTAA
AAGACTTTTTTAAATGTGTTTAAATTTTCATCATCGTAAAAAGGGATCATCTCAGAGAGAACAGCAGTATTCTGCGTA
TTTTTAAAAATGCTCTAGAGTAACATTTGAAGTAATTCAGTGTAGTGTATGCCAGTCCTAGAAATAATTTTTTTA
ATTTCTGGTGTCTGTTTCTAATACACTAACCAAGTTTTTCAAATATATTTTACAAAGATGCATCTTTACCCATTAT
TTTAAATGATTAAGGAGGATAGTTGCTTCAGGTAACAAGCTAATTTTTCAAATATTAGGCCCTTACAGAACTAT
TTAGTCAAAAAGTAAGATATTCCTTTAAATATATAACCCAAAGCTTTCAGTTAAACATGATATATCACAAATAC
TATTAAATGTTAAAGAGAAATGCAATAGCATTAAATGATGACCAAAATGTAAATATTGTAGATTTCAAAAGC
TGTGTCTCTATTAGGTGGGATACCAATGTAAATGATGTAACGTGACGTTGTTTTTTTACTTTTTTACTTTTTAAAAA
AGACTAAAAACGTTTTGATATTATACAATGTATTTGTTTCAGATAAGGTCATTGTCAATTTAGTATATATAATTAA
TATATGTACAAGTTTAAAGTAAATTCCTGTGAGTAAAAATGGACTTATCACAAAACATAGTTCTAAAGAAAGGTAT
ATGCTCATATACACGGTGTCCATTAATTTAATGGGAAGTAGGTATACTTCAGGAGAATTTGGCAAATAATTCAT
TAATCCATGTAAATATTCAAAGCTTGTCTATCCACATTATTTCAAGGGATCACTTTATTTTTTCATTATACCTT
CACAGCACTTTTCTAGTAAATCTGTAAACACAGAAATTCATTTTGGGAATCATTTTCATGTTACCAATAATTCAG
ACTTTTATAACATTTAATCATGTTGATGGAAATAGATTACATCTGCTAGAACCTTTTGCCTTAACTATTCACCAAT
ATATGCTAATATTCAATAATATGGATTGACTGTTTACAAACATTAGAATCTTGTCTTGGTTCCATTTTGTATGGCT
AATATTTGTTATCTTAATTAAGACTATTTCTGAGGTCATGATTACTTGAAAATATTGACTAAAACTGGGTCCTTA
GAAATTCAGGTGGAGCTGATTTACCTATGACTGAGGGGAAAAAAAATCAAATTTTACTGATAATAGTAATGCT
CCAATGAATTAATGACACATCTGTTCAATAAATAAAGAGCTTAAATATACAAAACATAAGAAATCTGGGCAACA

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FIGURE 1352B

AAACTTGTGGTCCTTTACTTTTGAATAGCTACCCAAGAAAAGGTTTTAAAGGTAAAAGTTATGAGTAATGTCATCA
CAATAAGCTCTTGTTTTAAATTCCTTTCTTTTATGTATAATTAGGTTTATGTTTCATGTCTTTTTTAAACCTTAT
AAAAGATTTAATTATCACATCTATTCTTCAATGTGGAAATATTAAATATTGTTGGTTGTAAAATAATATTTATGT
ACTTACTTGTGTCTGAAAAGTTGTAAAATGCTTACCTCAGCTATACAATATCTGTGACTCTGAAGACTTTAATGA
GTACTATTTCATTAAACAAGAAGTCAGAGGCAAATAGAGGAACACCATTATCTTACTTCCCTCTAGAATACTGTTG
AAACATTTGAAATACAAAAGTTTCAGTTTCATTTTGTGGCATTCAACTTCCTCTCCTCTTTTTCCGTTATTAGTG
TTGCTGCTCTGGTTAGCC

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FIGURE 1353

GCTGTGAGTTGGCGTGCTAGTGGGATGGCAGATGAGGAAGAAGACCCACGTTTGAGGAAGAAAATGAAGAAATT
GGAGGAGGTGCAGAAGGTGGACAGGGTAAAAGAAAGAGACTTTTTTCTAAAGAATTGCGATGTATGATGTATGGC
TTTGGGGATGACCAGAATCCTTATACTGAGTCAGTGGATATTCTTGAAGATCTTGTCATAGAGTTTATCACTGAA
ATGACTCACAAAGGCAATGTCAATTGGAAGACAAGGTCGAGTACAAGTTGAAGATATCGTCTTCTTGATTGCGAAAG
GACCCAAGGAAGTTTGCCAGGGTTAAAGACTTGCTTACTATGAATGAAGAATTGAAACGAGCTAGAAAAGCATTT
GATGAAGCAAATTATGGATCTTGACACTTTTTGTAGTTTCCGAAAATTACCATCTGGGGAAACCATATATAATAA
TTGTATATTTTTCTAAAGTAAGATTCTGATATCTAGCCGAGATCGCACCCTGCACTCCAGCCTGGGCGACAGAGC
GAGACTCCGTCTCAAAAAAAAAAAAAAGAAAGCAAGTTTCACATGAATAATGCTGTGTGGGAAGGCTTTTTGATTTA
AAATCTTTTCGGATTTATAACATCCTGTTAAGTTTTAGGAGAACCCGTTTTCCAGAGCAGATTCAAGCTTCTAA
AAATAAATGCTTTTCAGTAGCAGGAATGGCATTGTTTTAAAAAGCTGATGGCAGGGTAAGCATTGGGGTTAGTGTTT
TATTAACATATTTGTAAGTACTTGTTTCATTGTGGAAATGTGTCCTTGACTAAAACCATAACGTGGCTATGGAAACC
ATGTTTGTAGTTCTGAATACACAGGTTTTGTGTGTATTTACTCTATGTATTAAATTATTATTGCCCTTAGTTTTAA
AGTAAGGATTACAATTGGATTTAAGTAGATCACTGAATGTTATTGTTTATGAACTTAACTTTTGTATGCTGCT
TATAAACATGATCTATAAATCAGTGCTTGGGAAAATTTACTTTCTTAATCTACTGATACAGGAATAAAATATGA
ACAATTAAACAGATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1354

MADEEDPTFEEENEIIGGGAEGGQKKRRLFSKELRCMMYGFDDQNPYTESVDILEDLVIEFITEMTHKAMSI
GRQGRVQVEDIVFLIRKDPKRFARVKDLLTMNEELKRARKAFDEANYGS

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FIGURE 1355

ACGCCAAGGCGGCCACGTCTCTCCCCCTGGTGAAGAAGCTGCCCTGGGCTTGTCGTCCTAGGGTCTCCAGACA
TGTCTGAGGTGAAGAGCCGGAAGAAGTCGGGGCCCAAGGGAGCCCCTGCTGCGGAGCCCGGAAGCGGAGCGAGG
GCGGGAAGACCCCCGTGGCCCGGAGCAGCGGAGGCGGGGGCTGGGCAGACCCCGAACGTGCCTGAGCCTGCTGT
CGCTGGGGACGTGCCTGGGCCTGGCCTGGTTTGTATTTTCAGCAGTCAGAAAAATTTGCAAAGGTGGAAAAACCAAT
ACCAGTTACTGAACTAGAAACCAATGAATTCCAACAACCTCAAAGTAAAATCAGTTTAATTTTCAGAAAAGTGGC
AGAAATCTGAAGCTATCATGGAACAATTGAAGTCTTTTCAAATAATTGCTCATCTAAAGCGTCTACAGGAAGAAA
TTAATGAGGTAAAACTTGGTCCAATAGGATAACTGAAAAACAGGATATACTGAACAACAGTCTGACGACGCTTT
CTCAAGACATTACAAAAGTAGACCAAAGTACAACCTCCATGGCAAAGATGTTGGTCTCAAGATTACAAGTGTA
AAACAGATATACGACGGATTTTCAGGTTTAGTAAGTATGTAATATCATTGACAGATTCTGTGCAAGAACTAGAAA
ATAAAATAGAGAAAGTAGAAAAAATACAGTAAAAAATATAGGTGATCTTCTTTCAAGCAGTATTGATCGAACAG
CAACGCTCCGAAAGACAGCATCTGAAAATTCACAAAGAATTAAGTCTGTTAAGAAGACGCTAACCGAACTAAAGA
GTGACTTCGACAAACATACAGATAGATTTCTAAGCTTAGAAGGTGACAGAGCCAAAGTTCTGAAGACAGTGACTT
TTGCAAATGATCTAAAACCAAAGGTGTATAATCTAAAGAAGGACTTTTCCCGTTTGAACCATTAGTAAATGATT
TAACACTACGCATTGGGAGATTGGTTACCGACTTACTACAAAGAGAGAAAGAAATTGCTTTCTTAAGTAAAAAA
TATCTAATTTAACAATAGTCCAAGCTGAGATTAAGGATATTAAGATGAAATAGCACACATTTTCAGATATGAATT
AGTTTGACATTATTGAGATTAGACTAAGGTAATTTTTTAAATGGGACCTCTCATGAGAAGACTGGTAAATCAAAA
ATAATGATATTTTGGAGCAAAGTCATTTTATATTTAATCCTATTTTGTACAGTAAAAATAAACTTTAAAGCAG
GTTGATTTTCCAAAATAAATATGCTAAAACCTAAAAA

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FIGURE 1356

MSEVKSRKKS GPKGAPAAEPGKRSEGGKTPVARSSGGGGWADPRTCLSLLSLGTCLGLAWFVFQQSEKFAKVENQ
YQLLKLETNEFQQQLQSKISLISEKWQKSEAIMEQLKSFOIIAHLKRLQEEINEVKTWSNRITEKQDILNNSLTTL
SQDITKVDQSTTSMADVGLKITSVKTDIRRISGLVTDVISLTDVQELNKEIEKVEKNTVKNIGDLLSSSIDRT
ATLRKTASENSQRINSVKKTLTELKSDFDKHTDRFLSLEGDRAKVLKTVTFANDLKPKVYNLKKDFSRLLEPLVND
LTLRIGRLVTDLLQREKEIAFLSEKISNLTIVQAEIKDIKDEIAHISDMN

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FIGURE 1357B

TCTTTGTGGCCTAGTACATAGTTAATTTAGTGAATGCTTCCAGTTGTACTTGAAAAGAATGTATATTTTCTGATT
ATTGAGGGTAAATTTCTCTATATATGTTTTCTGTTAATAAATATGTAGCTATGTGCTTATGAAA

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FIGURE 1358

VRSTRNIHSVISGD

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FIGURE 1359

CCGCAGAACTTGGGGAGCCGCCGCCATCCGCCGCCGAGCCAGCTTCCGCCGCCGAGGACCGGCCCTGCC
CCAGCCTCCGAGCCGCCGCCGTCCACGCCGCCGCCGAGGGCGAGTCGGGGTCGCCGCTGCACGCTTCT
CAGTGTTCCCCCGCGCCCCGCATGTAACCCGCCAGGCCCGCGAACGGTGTCCCTGCAGCTCCAGCCCCGGCT
GCACCCCCCGCCCCGACACCAGCTCTCCAGCCTGCTCGTCCAGGATGGCCGCCAAGGCCGAGATGCAGCTG
ATGTCCCCGCTGCAGATCTCTGACCCGTTTCGGATCCTTTCTCACTCGCCACCATGGACAACCTACCCTAAGCTG
GAGGAGATGATGCTGCTGAGCAACGGGGCTCCCCAGTTTCTCGGCCGCCGCCGGGGCCCCAGAGGGCAGCGGCAGC
AACAGCAGCAGCAGCAGCAGCGGGGGCGGTGGAGGCGCGGGGGCGGCAGCAACAGCAGCAGCAGCAGCAGCACC
TTCAACCTCAGGCGGACACGGGCGAGCAGCCCTACGAGCAGCTGACCGCAGAGTCTTTCTTGACATCTCTCTG
AACAACGAGAAGGTGCTGGTGGAGACCAGTTACCCAGCCAAACCACTCGACTGCCCCCATCACCTATACTGGC
CGCTTTTCCCTGGAGCCTGCACCCAACAGTGGCAACACCTTGTGGCCCGAGCCCCCTTTCAGCTTGGTCAGTGGC
CTAGTGAGCATGACCAACCCACCGGCCTCCTCGTCTCAGCACCATCTCCAGCGGCCTCCTCCGCTCCGCTCC
CAGAGCCCCACCTTGAGCTGCGCAGTGCCATCCAACGACAGCAGTCCCATTTACTCAGCGGCACCCACCTTCCCC
ACGCCGAACACTGACATTTTCCCTGAGCCACAAAGCCAGGCCTTCCCGGGCTCGGCAGGGACAGCGCTCCAGTAC
CCGCTCCTGCCTACCCTGCCGCCAAGGTGGCTTCCAGGTTCCCATGATCCCCGACTACCTGTTTCCACAGCAG
CAGGGGGATCTGGGCTGGGCACCCAGACCAGAAGCCCTTCCAGGGCTGGAGAGCCGCACCCAGCAGCCTTCG
CTAACCCCTCTGTCTACTATTAAGGCCTTTGCCACTCAGTCGGGCTCCCAGGACCTGAAGGCCCTCAATACCAGC
TACCAGTCCCAGCTCATCAACCCAGCCGCATGCGCAAGTATCCCAACCGGCCAGCAAGACGCCCCCCCCACGAA
CGCCCTTACGCTTGCCAGTGGAGTCTGTGATCGCGCTTCTCCGCTCCGACGAGCTCACCCGCCACATCCGC
ATCCACACAGGCCAGAAGCCCTTCCAGTGC CGCATCTGCATGCGCAACTTCAGCCGCAGCGACCACCTCACCACC
CACATCCGCACCCACACAGGCGAAAAGCCCTTGCCTGCGACATCTGTGGAAGAAAGTTTGCCAGGAGCGATGAA
CGCAAGAGGCATACCAAGATCCACTTGC GGCAGAAGGACAAGAAAGCAGACAAAAGTGTGTGGCCTCTTCGGCC
ACCTCCTCTCTCTCTTCTTACCCTGCCCGGTTGTACCTCTTACCCTGCCCGGTTACTACCTCTTATCCATCC
CCGGCCACCACCTCATACCCATCCCCTGTGCCACCTCCTTCTCTCTTCCCGCTCCTCGACCTACCCATCCCCT
GTGCACAGTGGCTTCCCCCTCCCCGTGGTGGCCACCACGTACTCTCTGTTCCCCCTGCTTTCCCGGCCAGGTC
AGCAGCTTCCCTTCCCTCAGCTGTACCAACTCCTTCAGCGCCTCCACAGGGCTTTCGGACATGACAGCAACCTTT
TCTCCCAGGACAATTGAAATTTGCTAAAGGGAAAGGGGAAAGAAAGGGGAGAAAAAGAAACACAAGAGA
CTTAAAGGACAGGAGGAGGAGATGGCCATAGGAGAGGAGGGTTCTCTTAGGTCAGATGGAGGTTCTCAGAGCCA
AGTCCTCCCTCTCTACTGGAGTGGAAGGTCTATTGGCCAACAATCCTTTCTGCCACCTTCCCCTTCCCCAATTAC
TATTCCCTTTGACTTCAGCTGCCTGAAACAGCCATGTCCAAGTTCTTCACCTCTATCCAAAGAACTTGATTTGCA
TGGATTTTGGATAAATCATTTAGTATCATCTCCATCATATGCCTGACCCCTTGCTCCCTTCAATGCTAGAAAAAT
CGAGTTGGCAAAATGGGGTTTGGGCCCTCAGAGCCCTGCCCTGCACCCCTGTACAGTGTCTGTGCCATGGATTT
CGTTTTTCTTGGGGTACTCTTGATGTGAAGATAATTTGCATATTCTATTGTATTATTTGGAGTTAGGTCCTCACT
TGGGGGAAAAAAAAAAAAAAAAAGCCAAGCAAACCAATGGTGATCCTCTATTTTGTGATGATGCTGTGACAATAAG
TTTGAACCTTTTTTTTTTGAACAGCAGTCCCAGTATTCTCAGAGCATGTGTCAGAGTGTGTTCCGTTAACCTTT
TTGTAAATACTGCTTGACCGTACTCTCACATGTGGCAAAATATGGTTTGGTTTTTCTTTTTTTTTTTGAAAGTG
TTTTTCTTCGTCCTTTTGGTTTAAAAAGTTTACGTCCTTGGTGCCCTTTGTGTGATGCCCCCTTGCTGATGGCTT
GACATGTGCAATTGTGAGGGACATGCTCACCTCTAGCCTTAAGGGGGCAGGGAGTGATGATTTGGGGGAGGCTT
TGGGAGCAAAATAAGGAAGAGGGCTGAGCTGAGCTTCGGTCTCCAGAATGTAAGAAAACAAAATCTAAAACAAA
ATCTGAACTCTCAAAAGTCTATTTTTTTAACTGAAAATGTAAATTTATAAATATATTACAGGAGTTGGAATGTTGT
AGTTACCTACTGAGTAGGCGGCGATTTTTGTATGTTATGAACATGCAGTTCATTATTTTGTGGTTCTATTTTACT
TTGTACTTGTGTTTGCTTAAACAAAGTGACTGTTTGGCTTATAAACACATTGAATGCGCTTATTGCCCATGGGA
TATGTGGTGTATATCCTTCAAAAAATTAAAACGAAAATAAAGTAGCTGCGATTGGG

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FIGURE 1360

MAAAKAEMQLMSPLQISDPFGSFPHSPTMDNYPKLEEMLLSNGAPQFLGAAGAPEGSGSNSSSSSSSGGGGGGGG
GSNSSSSSSSTFNPQADTGEQPYEHLTAESFPDISLNNEKVLVETSYPSTTRLPPITYTGRFSLEPAPNSGNTLW
PEPLFSLVSLVSMTNPPASSSSAPSPAASSASASQSPPLSCAVPSNDSSPIYSAAPTFFTPNTDIFPEPQSQAF
PGSAGTALQYPPPAYPAAKGGFQVPMIPDYLFPQQQGDGLGTPDQKPFQGLESRTOQPSTPLSTIKAFATQSG
SQDLKALNTSYQSOLIKPSRMRKYPNRPSKTPPHERPYACPVESCDRRFSRDELTRHIRIHTGQKPFQCRICMR
NFSRSDHLTTHIRHTGKPFACDICGRKFARSDEKRRHTKIHRLQKDKKADKSVVASSATSSLSSYPSPVATSY
PSPVTTSYSPATTSYSPSPVPTSFSSPGSSTYSPVHSGFPSPSVATTYSSVPPAFPAQVSSFPSSAVTNSFSAS
TGLSDMTATFSPRTIEIC

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FIGURE 1361

GGCACAGGGCTGTGACTAGCGGGCCGGCCCCGGGGCCAGGACAGCGGGCGGGCGGGCGGGCGGGCCTGGCCCCGGGA
TGGCTATGTTCCGCAGCCTGGTGGCCTCGGCTCAGCAGCGGCAGCCGCCGGCCGGGCGGGCGGGCGGCAGACAGCG
GCCTGGAGGCGCAGTACACCTGCCCCATCTGCCTGGAGGTCTATACCGGCCCGTGGCCATCGGCAGCTGCGGCC
ACACGTTCTGCGGGGAGTGCTCTCCAGCCCTGCCTGCAGGTGCCATCCCCGCTGTGCCCCTGTGCGCCTGCCCT
TCGACCCCAAGAAGGTGGACAAGGCCACCCACGTGGAGAAGCAGCTCTCATCCTACAAAGCGCCCTGTGAGGCT
GCAACAAAAAGGTGACCCTGGCAAAGATGAGAGTGCACATTTTCGTCTGCCTGAAGGTCCAGGAGCAGATGGCCA
ACTGCCCCAAGTTTCGTCCCCGTGGTGCCACATCACAGCCTATCCCCAGCAACATCCCCAACAGGTCCACCTTCG
CCTGCCCCGTAAGTGTGGTGCCCGCAACCTGGACCAGCAGGAGCTGGTGAAGCACTGTGTGAAAGCCACCGCAGCG
ACCCCAACCGCGTGGTGTGCCCCATCTGCTCGGCAATGCCCTGGGGGGACCCCAGCTACAAGAGCGCCAACCTTCC
TGCAGCACCTGCTTACCGACACAAGTTCTCCTACGACACCTTTGTGGACTACAGTATTGACGAGGAGGCCGCT
TCCAGGCTGCTCTGGCCCTGTCTCTCTCTGAGAACTGAAGGGAAGCGCAGCCACCCGCTGCGTCTGGGGTCAGG
GATGTCCCCGCTCCTGTGTGCGACCTGGCACCTGCTCGGGAGCGCACCTCACCGGACTGAGCTCACAGGAGGAGC
CTGCACCCGCGCAGAAGGGGAGCCGGGGCCGAGCCTCCGGGCTGAATACGGGCCAGCCGCCGAGGCCGCCAGAG
CAGGGCCGCTGGTCCCACCGCGTCGCTGGGTCTTCGGTGCTTCTGGCCGAGCAGGCGGCCCTACTTGGGCAGG
GCTGGACGCTGGGACCTGGAGCTGCCGCCGTCTCTCAAAGCCATGATAACCCCTCGTGGGAAGAAGGGACCGAC
GCGCGAGTCGCGCTCCGCAGTCGAGCCGGGAGGAACCCAGGCTGCTGCCCTGCCAGCCCGACCTGCCCGGCC
CCGCTTCCACCTTGCGCATTTGGTACTGGCTTTTGTGATACTTAGGAACCTGGCATCTTTTCTATATTATCCAG
TGTGATAATCTTTTACGTTTTATAGAGCAAAGACAGAGCAGTTACTCTTCATATTGCAATATCTGTGTTTACT
AGGAATAATAGTATTTTTATGGAACATTTACAAAATTATTTTTTTAAGAAAAAATCAAAACAAGCATTGGGGG
ATTGGGGCAAGGATGGAAGGAGCAGTGGGGCAGCTGCCAGAGCTCAGGCGAGCCATGGGGTCTGCTGTGGGGTCT
GCCCTGGCCACCCACTGTGTGTCTGGGTCTTTGAGGTTTGTACGTTTCTCTTTGATGACCAGGAAGAAATCCAG
CACCCAGCCACAGGCTGTGGCTGCTCCCAGCAGAGGTGGGGCCGGCAGAGAAGGGGCCCTCTCCACCCAGAGTC
CTGGCCTTGGCCCGCTGTCACCTTCAAAGCTGACTGTGCCCGCTGCGGGAGGGGACGGCACCCAGTGGTGGA
GAGCTTGGGGCCTGGGCAGGGGCCGCTTGGCGGGCCGGGCAACACGTCAACATTCTTTTCTGTTCTTGGCATT
AATTATTGCTGTCTTTTTTTAAAAAAAAGTTTAAATAAAATGTCTCAGAGCAAAAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 1362

MAMFRSLVASAQQRQPPAGPAGGDSGLEAQYTCPICLEVYHRPVAIGSCGHTFCGECLOPCLQVPSPLCPLCRLP
FDPKKVDKATHVEKQLSSYKAPCRGCNKKVTLAKMRVHISSCLKVQEQMANCPKFVPVPTSQPIPSNIPNRSTF
ACPYCGARNLDQQELVKHCVESHRSDPNRVVCPICSAMPWGDP SYKSANFLQHLLHRHKFSYDTFVDYSIDEEAA
FQAALALSLEN

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FIGURE 1363

TTGAGCGCAGGTGAGCTCCTGCGCGTTCCGGGGGCGTTCCCTCCAGTCAACCCTCCCGCCGTTACCCGCGGCGCGCC
CGAGGGGAGTCTCCTCCAGACCCTCCCTCCCGTTGCTCCAAACTAATACGGACTGAACGGATCGCTGCGAGGGTGG
GAGAGAAAATTAGGGGGAGAAAGGACAGAGAGAGCAACTACCATCCATAGCCAGATAGATTATCTTACACTGAAC
TGATCAAGTACTTTGAAAATGACTTCGAAATTTATCTTGGTGTCTTCATACTTGCTGCACTGAGTCTTTCAACC
ACCTTTTCTCTCCAAGTACCAGCAAAAGGTTCTACTAGTTTCTTTTGATGGATTCCGTTGGGATTACTTATAT
AAAGTTCCAACGCCCCATTTTCATTATATTATGAAATATGGTGTTCACGTGAAGCAAGTTACTAATGTTTTATT
ACAAAAACCTACCCTAACCATTATACTTTGGTAACTGGCCTCTTTGCAGAGAATCATGGGATTGTTGCAAATGAT
ATGTTTGATCCTATTTCGGAACAAATCTTTCTCCTTGGATCACATGAATATTTATGATTCCAAGTTTTGGGAAGAA
GCGACACCAATATGGATCACAAACCAGAGGGCAGGACATACTAGTGGTGCAGCCATGTGGCCCGGAACAGATGTA
AAAATACATAAGCGCTTTTCTACTCATTACATGCCCTTACAATGAGTCAGTTTCATTTGAAGATAGAGTTGCCAAA
ATTGTTGAATGGTTTACGTCAAAAGAGCCCATAAATCTTGGTCTTCTCTATTGGGAAGACCCTGATGACATGGGC
CACCATTTGGGACCTGACAGTCCGCTCATGGGGCCTGTCAATTCAGATATTGACAAGAAGTTAGGATATCTCATA
CAAATGCTGAAAAAGGCAAAGTTGTGGAACACTCTGAACCTAATCATCACAAAGTATGGAATGACGCAGTGC
TCTGAGGAAAGGTTAATAGAACTTGACCAGTACCTGGATAAAGACCCTATACCCTGATTGATCAATCTCCAGTA
GCAGCCATCTTGCCAAAAGAAGGTAAATTTGATGAAGTCTATGAAGCACTAAGTACGCTCATCCTAATCTTACT
GTTTACAAAAAGAAGACGTTCCAGAAAAGGTGGCATTACAAATACAACAGTCAATTCACCAATCATAGCAGTG
GCTGATGAAGGGTGGCACATTTTACAGAATAAGTCAGATGACTTTCTGTTAGGCAACCACGGTTACGATAATGCG
TTAGCAGATATGCATCCAATATTTTTAGCCCCATGGTCTGCCTTCAGAAAGAATTTCTCAAAAGAAGCCATGAAC
TCCACAGATTTGTACCCACTACTATGCCACCTCCTCAATATCACTGCCATGCCACACAATGGATCATTCTGGAAT
GTCCAGGATCTGCTCAATTCAGCAATGCCAAGGGTGGTCCCTTATACACAGAGTACTATACTCCTCCCTGGTAGT
GTTAAACCAGCAGAATATGACCAAGAGGGTGCATACCCTTATTTCATAGGGGTCTCTCTTGGCAGCATTATAGTG
ATTGTATTTTTTTGTAATTTTCATTAAGCATTAAATTCACAGTCAAATACCTGCCTTACAAGATATGCATGCTGAA
ATAGCTCAACCATTATTACAAGCCTAATGTTACTTTGAAGTGGATTTGCATATTGAAGTGGAGATTCCATAATTA
TGTCAGTGTTTAAAGGTTTCAAATCTGGGAAACAGTTCCAAACATCTGCAGAAACCATTAAGCAGTTACATAT
TTAGGTATACACACACACACACACACATACACACACACGACCAAAATACTTACACCTGCAAAGGAATAAA
GATGTGAGAGTATGTCTCCATTGTTCACTGTAGCATAGGATAGATAAGATCCTGCTTTATTTGGACTTGGCGCA
GATAATGTATATATTTAGCAACTTTGCACTATGTAAAGTACCTTATATATTGCACTTTAAATTTCTCTCCTGATG
GGTACTTTAATTTGAAATGCACTTTATGGACAGTTATGTCTTATAACTTGATTGAAAATGACAACCTTTTGCACC
CATGTCACAGAATACTTGTTACGCATTGTTCAAACCTGAAGGAAATTTCTAATAATCCCGAATAATGAACATAGAA
ATCTATCTCCATAAATTGAGAGAAGAAGAAGGTGATAAGTGTGAAAATTAAATGTGATAACCTTTGAACCTTGA
ATTTTGGAGATGTATTCCCAACAGCAGAATGCAACTGTGGGCATTTCTGTCTTATTTCTTTCCAGAGAACGTGG
TTTTCATTTATTTTTCCCTCAAAAGAGAGTCAAATACTGACAGATTCGTTCTAAATATATTGTTTCTGTCTATAAA
ATTATTGTGATTTCTGATGAGTCATATTACTGTGATTTTCATAATAATGAAGACACCATGAATATACTTTTCTT
CTATATAGTTTCAGCAATGGCCTGAATAGAAGCAACCAGGCACCATCTCAGCAATGTTTTCTCTTGTGTTGTAATTA
TTTGCTCCTTTGAAAATTAAATCACTATTAATTACATTAATAATCAAATTGGATAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1364

MTSKFILVSFILAALSLSTTFSLQLDQQKVLLVSFDGFRWDYLYKVPTPHFHYIMKYGVHVQVTNVFITKTYPN
HYTLVTGLFAENHGIVANDMFDPIRKNKSFSLDHMNIYDSKFWEEATPIWITNQRAGHTSGAAMWPGTDVKIHKRF
PTHYMPYNESVSFEDRVAKIVEWFTSKEPINLGLLYWEDPDDMGHHLGPDSPLMGPVISDIDKKLGYLIQMLKKA
KLWNTLNLIITSDHGMTQCSEERLIELDQYLDKDHYTELIDQSPVAAILPKEGKFDEVYEALTHAHPNLTVYKKED
VPERWHYKYNRIQPIIAVADEGWHILQNKSDDFLLGNHGYDNALADMHPIFLAHGPAFRKNFSKEAMNSTDLYP
LLCHLLNITAMPHNGSFWNVQDLLNSAMPRVVPYTQSTILLPGSVKPAEYDQEGSYPYFIGVSLGSIIVIVFFVI
FIKHLIHSQIPALQDMHAEIAQPLLQA

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FIGURE 1365

GAATCTCTCGCGGGCAGCAGGGCGCGCGCTGCACGCACAGTACTAGGTCAGGTGGTGCTCCCGGGTGAGGAGCTG
CTCCTGCCGGAACAGGAGGACGCGGAAGGCCCTGGGGGTGCAGTGGAGCGACCGTTGAGCCTGAATGCTAGAGCG
TGCTCGCGGGTGCGCGTTTGTATGCGGTCCGGGCCTTCGACGCTGTGGGGACCGCCTGCTGGTCACCAAGTGCGG
CCGCCTCCGTACAAGGAGCCCGGCAGTGGAGGCGGCGGCGGTGTTTACTGGGTGGACTCTCAGCAGAAGCGGTA
TGTTCCAGTAAAAGGAGACCATGTGATTGGCATA GTGACAGCTAAATCTGGAGATATATTCAAAGTTGATGTTGG
AGGGAGTGAGCCAGCTTCTTTGTCTTACTTGTCAATTGAAGGTGCAACTAAAAGAAACAGACCAAATGTGCAGGT
TGGAGATCTCATCTATGGCCAGTTTGTGGTTGCTAATAAAGACATGGAACCAGAGATGGTCTGTATTGACAGCTG
TGGACGAGCCAATGGAATGGGTGTCATTGGACAGGATGGTCTGCTTTTTAAAGTGA CTCTGGGCTTAATTAGAAA
GCTATTAGCTCCAGATTGTGAAATCATA CAGGAAGTGGGAAAAC TCTATCCACTGGAGATAGTATTGGAATGAA
TGGAAGAATATGGGTAAAGGCAAAAACCATCCAGCAGACTTTAATTTTGCAAACATTTTAGAAGCTTGTGAACA
CATGACGTCAGATCAAAGAAAACAGATCTTCTCCAGATTGGCAGAAAGTTGATATAGGTGGACTTTTTTACAGGT
CAGTTGAGGCAAAAAACTATGGGTTTTTTCAGGTGAACCTCCCCATTTAAATACTCAGAAGATAAGGTGTGAAT
GTAIGTATTATTAGAGTCCGAAAGTATTTTATAAGTTACTGGTTTTTCACCCACGCTTTTGTGGGAGAGAAAATC
ATTGCAAAATCATTTTTTTTTTGTTCGGTACAATAAAGTTTACTAAAAACAAA

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FIGURE 1366

MLERARGCAFCVCGPGLRRCGDRLLVTKCGRLRHKEPGSGGGGGVYWVDSQQKRYVPVKGDHVGIVTAKSGDIFK
VDVGGSEPASLSYLSFEGATKRNRPNVQVGDLIYGQFVVANKDMEPEMVCIDSCGRANGMGVIGQDGLLFKVTLG
LIRKLLAPDCEIIQEVGKLYPLEIVFGMNGRIWVKAKTIQQTLILANILEACEHMTSDQRKQIFSRLAES

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FIGURE 1367

GGCACGAGGTGATGAAGAAGCCAGTTATCTCAGATTTTCGAAATAGTATATGGAAAAATGAAGAAGAGAAAAGTGGAA
AATTTTTCATCCTTTGCGACTAGTTCGGGATCCACTGTCACCTGCTGTAAGACAGAAAGAAACTGTGAAAAATGA
CCTGCCTGTAAATGAAGCTGCAATTAGAAAAATAGCTGCCCTTGAAAATGAGCTGACTTTTCTTCGCTCTCAGAT
TGCAGCAATTGTGGAAATGAGGAAGTGA AAAATAGTACAAATTCTAGTTTCTTTGGCTTGAGTGACGAGCGCAT
TAGTTTGGGTGAGCTGTTCATCATCGCGGGCTGCCCATCTGAGTGTGGACCCAGATCAGCTTCCAGGTTTCAGTGCT
TTCTCCTCCTCCTCCTCCACCACTTCCTCCTCAGTTTTTCATCTCTCCAGCCACCGTGTTTTCTCCCGTACAACC
AGGATCTAATAATATTTGTGACTCAGATAATCCAGCAACTGAAATGAGCAAACAGAACCCGGCTGCTAATAAGAC
CAATTATAGTCATCATTTCAAAAAGCCAGAGAAATAAAGATATTCCAAACATGTTGGACGTTCTAAAGGATATGAA
TAAGGTTAAGCTTCGTGCAATTGAGCGGTACCTGGCGGTAGACCCATTTCATAAGAGGAAAAGACAGAATTCACA
TTGGGATCCAGTTTCTTTAATATCTCATGCACCTAAACAGAAATTTGCATTTCAAGAAGATGATTCTTTTGAGAA
AGAGAATAGATCTTGGGAATCTTCCCCATTTTCTAGTCCAGAACTTCAAGGTTTGGACATCACATTTACAGTC
AGAAGGACAGCGAACTAAAGAAGAAATGGTCAACACAAAAGCTGTTGACCAAGGTATCAGCAACACAAGCCTTCT
AAACTCAAGGATTTAAACTCAACTTAAGGTTGAGCTTTAAACTTCCAAAACCTTCTTCTGGATGATAAATTATTC
TTAGAAACTGATTTGGACTGTTAAAGGCTAAAAGTAGATGTATTTAAAGACTCTTCTTGACACATTTTGCCTACA
CTTGCTATGTAAATATGTATGCCTGTCATTTTTGTTTCCTTTGTTCTTTTACGTTTATACTCTGTTCTTCTGT
ACATAGAGCTTAAAATAAACATTCTTTTGAAGTTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1368

MQELKNSTNSSSFGLSDERISLGQLSSSRAAHLSDPDQLPGSVLSPPPPPLPPQFSSLQPPCFPPVQPGSNNI
CDSDNPATEMSKQNPAAANKTNYSHHSKSQRNKDIPNMLDVLKDMNKVKLRATERSPGGRPIHKRKRQNSHWDVPS
LISHALKQKFAFQEDDSFEKENRSWESSPFSSPETSFRFGHHISQSEGQRTKEEMVNTKAVDQGISNTSLLNSRI

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FIGURE 1370

MTMETVESQHDGSITASLTESKSAHVQTQTGQNSIPALAQVAAIAETDESAESEGVIDSHKRREILSRFPSYRKI
LNELSSDVPGVPKIEERSEEEGTTPPSIATMAVPTSIYQTSTGQYSMYAAIRYDTVLALSLL

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FIGURE 1371

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCCATGCTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGCTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCCAGAGCAGGCAGTG
GAACTCAGTGCCCTCCTGGCCCAGACCAAGTTTGAGAGCTACAACCAGAACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTTGAGATTGTGTGCGCAATGGAAAACATATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTAAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCA
TGTCCCCTCTGCAGGTGCGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAGTCTTCTCAATCTG
ACTGTAATCTAATCTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCACTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAA

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FIGURE 1372

MLCYVTRPDAVLMEVEVEAKANGEDCLNQVCRRLGII EVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQT KFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSAVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSSESSMNCSSCEGLSCQQTRVLQ
EKLRLKLEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQH VYLPHTHTSLNLTVI

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FIGURE 1373

ACATGACGGGCACGCCAGGCGCCGTTGCCACCCGGGATGGCGAGGCCCCGAGCGCTCCCCGCCCTGCAGTCCGA
GCTACGACCTCACGGGCAAGGTGATGCTTCTGGGAGACACAGGCGTCGGCAAAACATGTTTCTGATCCAATTCA
AAGACGGGGCCTTCCTGTCCGGAACCTTCATAGCCACCGTCGGCATAGACTTCAGGAACAAGGTGGTGAAGTGTGG
ATGGCGTGAGAGTGAAGCTGCAGATCTGGGACACCGCTGGGCAGGAACGGTTCCGAAGCGTCACCCATGCTTATT
ACAGAGATGCTCAGGCCTTGCTTCTGCTGTATGACATCACCAACAAATCTTCTTTTCGACAACATCAGGGCCTGGC
TCACTGAGATTTCATGAGTATGCCCAGAGGGACGTGGTGATCATGCTGCTAGGCAACAAGGCGGATATGAGCAGCG
AAAGAGTGATCCGTTCCGAAGACGGAGAGACCTTGCCAGGGAGTACGGTGTTCCCTTCCTGGAGACCAGCGCCA
AGACTGGCATGAATGTGGAGTTAGCCTTCTGGCCATCGCCAAGGAAGTGAATAACCGGGCCGGGCATCAGGCGG
ATGAGCCCAGCTTCAGATCCGAGACTATGTAGAGTCCCAGAAGAAGCGCTCCAGCTGCTGCTCCTTCATGTGAA
TCCCAGGGGGCAGAGAGGAGGCTCTGGAGGCACACAGGATGCAGCCTTCCCCCTCCCAGGCCTGGCTTATTCCAA
GAGGCTGGTCTTGAATTCCTGAGCTCAAGCAACCTGCCGGCCTCGGCCTCCCAAAGTACTGGGATTACACGCAGA
AGGCACCATGCCCAGGCTAGATGTGTCTTATCCCAATCCTTTGGCAGGCATGCAGCTCCACAGGCGATTCTTCA
AGCAGCTGAAGTGTTTAGCCCTCCTGGGTAAAGAGCCAGATAAGGAGAAATCCCTTTCCTAGGTTTGAATGTGT
TGTGAAAAAAGAGAAATCCCTGGCTCCTGGAGCTGGTGGGAGACAAGATTAAGCAAACCTCCCCTGACATGTA
TCCCTTTGACCCCAAGCTCTGCCTCCTCCCTGACCACCCATGCCCTTTCCTTTAACTTCTCAAACAGATACCAGG
GCCTAAACTGCTTTACCTCCCTCCTACTGAGTCAGGTTAGGTGGTGGGAGGTCACCCATTTCGAGTTAAACCA
ATGCAATATGAGTAAAACAAAGTCATGTGGGTATGTCTGGGGTAGAGAGAGGGGTAGCAAGTTCATGTGTCTCCTC
TTGGTCACATATCTCCCAAAGCTCCGATCCCTGCCATGGGAAGTGGACAGGAAACATGAGGTCATGACCTGCAGG
CATCTTTACTGCAGCTCTGCCGGCCTGGAGGGGGAGAGGGGGAGGAAGAAGTATGCGCTGCACATTTCTGAGGCT
ACTGCATTTGCTTTCAAGGCAGAAATCTTGCTCTGAGCAGTCAGCGGCTCCAGTTTGGGGCCCGATAAGGAAGTTC
TCCGTGGCCTCCCTCAGGCAGAGCAGGGAGGAGGCTGACATTGCCAGTCTCTTCTGGGGCCCAAGGCAGGTTGCA
GGAGATCCAATCCCATAGACAGCTCTGGGCCTCTTGCAATTTGAGTTTTTCAGAATTAAACTGCAGTATTTTGAA
AGCAA

1521/1629
FIGURE 1374

MTGTPGAVATRDGEAPERSPPCSPSYDLTGKVMLLGDVGKTCFLIQFKDGAFLSGTFIATVGIDFRNKVVTVD
GVRVKLQIWDTAGQERFRSVTHAYYRDAQALLLLYDITNKSSFDNIRAWLTEIHEYAQRDVVIMLLGNKADMSSE
RVIRSEDGETLAREYGVPFLETSAKTGMNVELAFLAIKELKYRAGHQADEPSFQIRDYVESQKKRSSCCSFM

1522/1629
FIGURE 1375

GCGGCGGGTACTCTGTGCCCCGCGTCCCGGAGGCAGCCGACTGCGCCACCCACCCCTCGCACGGCCGGGCGGGAC
CCGCGCCACCAGCCCGGACCTCCGTCGTCCCGCGGCGACCAAACCCCGCTGGCCCCACCGCTGTGACTACTCT
GGACTCGCCCGCAGAGTTTGCCCGCCGGGGAGGGTGGCCGATTGGCGGAGCGCACTCCTGCTGTTTTCCCCACCA
TCTCGTGGATGTCTGTCCTCGGGTGGTGAGAGAACTTTGCAGTGGGCTGGAGCGCCCTTTGCGGAGAAGCACACG
AAGGTGAAGGAAGGAAAGAAAGAAAGACCGAGGAAGAAGGAGCTCGGAAGAAGGGTCCGGAGCGGCCGGTCCGGCC
GTGCAGGGCGAGTGCGCCCGAGGCGCGGCCCTGATGCTCCCCGGGCTCGAGGAGCATTGGGCACTTGCGGGAC
TGCTCTCGGTGGAGTAGCCCCGTCGGGCCCGGAGGGTTTGTGCAACCGCGGAGAAACACCGAGTGTGGTCGCACG
GGGCGTGCCGAGCCGCCTCCCGGCGCGCCCTCCGCACCTTTCCCGCCTCGTTCATCCGTGCTCCCCGGCCAGGAG
CCTCCGCTGCGTCTTCAACCTCGCTCCCCCTTTGCGTCCCGGGAGCCTGCGAGCACCCGGCCGAAGGCGCAGCCGA
ATCTTGCGGGAGTGCGCCCGAAAGCGTCGGGTTTGTGTGGGGTTAGCGGGGGCCGCCGCGCCACCTGCACCTCGC
CCGCCCGCCGCTCGGGGAAAAGCCCGAAGAGGAGGCGGACCAGGAGAAGAGCAAAGAAAAGCAGTCCGTCTGGATT
TGTTTGCCAGGACTGGCGCCGCGCACGCGGATCGCCGAGGGGAGTGCGGTCCGGAGTACCGCGCCCCCGCCTCC
CCGCCCGGGCAGCTGAGGCCCGGGGTTGGAGCGCTGCCCCCGCGTACAGTCCCCGAGCGCCCGACGTCTCCGCGC
AGGTTCTTGAAGCAGCTGGGCCTGGGGCGCCACTAATGTGGCCCTGAGGGCCGGAGCCCGCACCAGCGGGAGCG
GGAGCCGGAGCAGCTGCGGGCGCCGAGTGGCCGGTGCGCCCGGCGGAGCGCGCGTGCCTGGCCAGCGCGCTCCCC
GCTTCTGCTTGGCTTTCCGGCTTAATTTTCCTCGGCGGGATTAAAGTTGGAAATTGACCGGAGAATTGAGTTGCC
GGGGAACAGAGCCCCGGCCGCCAGAGCGATGTTCCCGCAGAGCGGCGACCCGACGCCGACCCAGGCTGCAGG
CCAGCCCTTCAAGTTCACTATCCCGAGTCCCTGGACCGGATTAAAGAGGAATTCCAGTTCCTGCAGGCGCAGTA
TCACAGCCTTAAATTGGAATGTGAGAACTGGCAAGTGAAAAGACAGAAATGCAGAGGCACCTATGTGATGTATTA
TGAAATGTCATATGGATTAAACATTGAAATGCACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGC
ACAAGTCATCCCATTTCTGTCTCAGGAACATCAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGAC
CATGGCAGAGTTGAATGCCATCATCGGGGTACGTGGCCTACCAGGTCTACCTCCTACACAGCAGCAGTTGCAAGC
TCAGCATCTTTCTCATGGCCACGGACCCCCAGTTCCCCTTACGCCTCACCTTCGGGACTTCAGCCTCCTGGAAT
CCCGCCCCCTCGGGGGCAGTGCCGGCCTTCTTGCGCTGTCTAGTGTCTGAGTGGGCAGTCTCACTTGGCAATAAA
AGATGACAAGAAGCACACGATGCAGAGCACACAGAGGTGAGAGGCCGGGCAAGCCAGATTAGGACTTTGTCCT
CATACTCTTACAGTGTGCAAAGTTGTGTGCATCGCTAAAGAGAGCCCCAACCTATACAGAGAGCAAACAATGAG
ATAAGAGGAAGTGTGCAAAGCTTTCCACTGAAACACAGGTACCCTGGAAGTTTGCAAGGTTTGTGTGGGCAT
CTGTAGATTTCTCGATCTCGTTAGATTGCAGGCATCTTGACATCTTGCAACTGCCTAGTTAATGCCAGTGGCCT
GTACCATATTATGGAAAAGTGTAACTGCTTAATTGGGTAATTTTCAAAGAAAGTAATGTTGTTAAATGGGGCGA
AATAAGAAGTTAAATTTGAAAGTGAATGTGTTCAAATGAAAGGTTTGATAATTGCGTCTGTTACTACTTAGTTTC
ATAGGCTTTAATTCTAGTATGCATTAAATATTGGGCAAAATTGCACCTTGACTAATTTTTTTGAAGAAAAGTAATTT
ATTCTGTCAAGAAATAAAAAAATAGGCTTTGTGTATGGTTAAACTGTAAATCTTATGTTTACAAAATACTGTAAT
TTTCAGGAAATCACTGTATTAGGAATGTGCAATGACTTATATAAATAAAAGCCATTTTTTAAACTGAAAAA

1523/1629
FIGURE 1376

MF PQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYYEMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAKQVTMAELNAIIGVRGLPGLPPTQQQLQAQHLSHGHGPP
VPLTPHPSGLQPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHDAEHHRGERPGKPD

1524/1629
FIGURE 1377

GCAATTGGTGGCTTTGAAGGCGCGGCGAGCGGGAACAGCTCTTGAGGAGTGAGACTGCAGGAGATGTGGGCCGTG
CCAAAGAGATGGATGAGACTGTTGCTGAGTTTCATCAAGAGGACCATCTTGAAAATCCCATGAATGAACTGACAA
CAATCCTGAAGGCTGGGATTTTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTG
TAGTTCAGCACTTGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAGACATCATT
ATATGCAATTTTCATCAGCACCAGAAAAGTTTGGGATGTTTTTCAGATGAGTAAAGGACCAGGTGAAGATGTTGACC
TTTTTGATATGAAACAATTTAAAAATTCGTTCAAGAAAAATTCCTCAGAGAGCATTAAAAAATGTGACAGTCAGCT
TCAGAGAACTGAGGAGAATGCAGTCTGGATTGCAATTGCCTGGGGAACACAGTACACAAAGCCAAACCAGTACA
AACCTACCTACGTGGTGTACTACTCCAGACTCCGTACGCCCTTCACGTCCTCCTCCATGCTGAGGCGCAATACAC
CGCTTCTGGGTGAGGCGCTGACAATTGCTAGCAAAACACCATCAGATTGTGAAAATGGACCTGAGAAGTCGGTATC
TGGACTCTCTTAAGGCTATTGTTTTTAAACAGTATAATCAGACCTTTGAACTCACAACCTCTACGACACCTCTAC
AGGAAAGAAGCCTTGGACTAGATATAAATATGGATTCAAGGATCATTCATGAAAACATAGTAGAAAAAGAGAGAG
TCCAACGAATAACTCAAGAAACATTTGGAGATTATCCTCAACCACAACCTAGAATTTGCACAATATAAGCTTGAAA
CGAAATTCAAAAGTGGTTTTAAATGGGAGCATCTTGGCTGAGAGGAAAGAACCCCTCCGATGCCTAATAAAGTTCT
CTAGCCACATCTTCTGGAAGCATTGAAATCCTTAGCACCAGCGGTATTGCAGATGCTCCACTTTCTCCACTGC
TCATTGCATACCCAACAAGAGAATGAATTATTTTAAATTAGAGATAAATAAGACGTGCGTGGTTTTCTTAAGCA
CAGCTCCTCCTTCTTGATATTGCACATGCACCTTCAGTTCATGGGCTAGCTGTATAGCTTNCGTCTGTAACTTGT
AATTTCAAGAAATCCTTGGTATTGAATTTTAGAAATGCTCACATAATTGTTGGGACTGATTATTCTCCACGGAT
ATGCCTCCTCTCTCTGATATCCTGCTAACTGTAGCCGTTGTGGCATTGAGATGACAGGACATATATATATATGG
CCCCACACTTGACCTTGAGTGCCTGAATGCTCTGAAATCAAGCATATGGCACAGCGCTCAAGACTTTTGGGTTTG
TGTCCTTTTTTCTATGGCTGTCTCTTCTCAATTCTGGAGAGGTCTGGTCCAGTGGCTGGTTTTCCAGGGATTGAT
TCTTAAGCTCTGGATCACAGAGAGAAGCAACAAGGAACTATACTCAACTCAAACTTTTTAGGAGAATCATGAAA
TTGGTCTATTCAAAGGATGGAGTTGAGTCCATTCTGTTATTGTTGCAAGAGGTTGCATATTTGGTGAGTCAGTTA
TATAAAATAGTGTCTTATTGTAAATATGATACTTCTCATAATCTATTTTATCATGTGTATAACATTCAAACCTGA
CAAATATATTGACTTATGAATAAAGGTGTCAAAAAACTGGCACATCAGTTAATTTTGATCAAAGTACTTCAGTGA
TCATCACTAAATACCCCTATCTTTTTAAAAANNN
NN
NNAATGACATCACTTTGGTTCAGAGCTCTAAAATGGAGGGAGGAAGCCATTCTAAAAAGGACTCCCTACATGACC
TGCAACTTGAAAAAAAATTAAAAGCTCCAAAAAAAACAATACAGGAGCTTACCTTGAACTTTGAATTGGGCC
AAATTGCGATGACCACTGCATCCTGGAAAATTTTATTTTACCAGCACTACAACCTCCTCAACAGCACCACCAATA
AACTATGGATTTTTGTACTAAGCCAGTTGCCTCTTTCAAACAACCTTGCAACTTGCTAATCACCCTCAGCTTT
TTTTAAAAACCCCTCCTCTACCCTCTCTCTTCAGAACACAAGTGGCTTCTAGCTGAATCTGTCTCCCAAATTGCA
ATTCTTAAGACCTCAATAAAAACACCTTGTCTTGCTGAAAA

1525/1629
FIGURE 1378

AIGGFERGEQEQLLRSETAGDVGRAKEMDETVAEFIKRTILKIPMNELTITILKAWDFLSENQLQTVNFRQRKESV
VQHLLHLCEEKRASISDAALLDIIYMQFHQHQKVWDVFMQSKGPGEDVDLFDKQFKNSFKKILQRALKNVTVSF
RETEENAVWIRIAWGTQYTKPNQYKPTYVVVYSQTPYAFTSSSMLRRNTPLLQALTIASKHHQIVKMDLRSRYL
DSLKAIVFKQYNQTFETHNSTTPLQERSLGLDINMDSRIIHENIVEKERVQRITQETFGDYPQPQLEFAQYKLET
KFKSGLNGSILAERKEPLRCLIKFSSPHLLEALKSLAPAGIADAPLSPLLCIPNKRMYFKIRDK

1526/1629
FIGURE 1379

CCACTATTCCACAGGGAAGGTCAGCGCTTCCTTCACCTCCACCGCGATGGTCCCGGAGACCACACATGAAGCAGC
TGCCATCGACGAGGATGTGCTGCGCTACCAAGTTTGTGAAGAAGAAGGGCTACGTGCGGCTGCACACCAACAAGG
CGACCTCAACCTGGAGCTGCACTGCGACCTGACACCAAAAACCTGCGAAAACCTTCATCAGGCTTTGCAAGAAGCA
TTATTACGATGGACCATCTTCCACAGATCCATCCGGAACCTTGTGATCCAAGGGGGCGACCCACAGGCACAGGC
ACGGGTGGGGAGTCATACTGGGGGAAGCCCTTCAAAGACGAGTTCCGGCCCAACCTCTCGCACACGGGCGCGGC
ATCCTCAGCATGGCCAACTCCGGGCCCCAACAGCAACAGGTCTCAATTCTTCATCACGTTTCGCTCCTGTGCCTAC
CTGGACAAGAAGCATACCATCTTTGGACGGGTGTGGGGGCTTTGACGTAAGTACAGCCATGGAGAATGTGGAG
AGTGACCCCAAACTGACCGCCCTAAGGAGGAGATCCGCATTGATGCCACTACAGTGTTTCGTGGACCCCTATGAG
GAGGCCGATGCCAGATTGCGCAGGAGCGGAAGACACAGCTCAAGGTAGCCCCGAGACCAAAGTGAAGAGCAGC
CAGCCCCAGGCAGGGAGCCAGGGCCCCCAGACCTTCCGCCAGGGCGTGGGCAAGTACATCAACCCAGCAGCCACG
AAGCGAGCAGCAGAGGAAGAGCCCTCAACCAGTGCCACTGTCCCATGTCCAAGAAGAAGCCAGTCGGGGTTTT
GGGGACTTCAGCTCCTGGTAGCAGCAGGCTGCCTGATGACCACTAGAGGTATGTCTGCCCTCGTCACCCTGCTG
CACACCAATCTGTGGCCCTTCATCATGCTAAGAACAAGAACTGCGCCATGGCTGGCTCCTTCTCTTCTCCAGCCC
ATCCCTCTGCAGCCTGTCTATCCCTGTCTGTGACCAATTGGTCGGGCCCCCTGGGCTCTAGAGTGACTTTTGACGCCC
TCCATCCCTCCCGCCAGGCACTGTCTCCGCAAGGCCTGGTGCAGCCCTGGCAGTAAGTGGCTTGTAAGAGGCTC
AGACACCAAGCTGGGCCTGCAGAGGAGGGGCACAGTAGGACACAGTGACTGCCAGGTGTCCACACACCTGTAGG
CCTCTGAGCCAGCGTCCAGGGTACAGATGCGGGTGGTGGGGATGAAGGCCTGACCAGGGAGGGAGAAGCAGGTTT
GGAGAGGACCCTGTGCCACCCTGACAGACACCCTGGCTGGCCCTGACTGACTGTATTCTCTGGCCACATTCAAG
TCCCCATTGGTGGGGGCAGAGAAGTAGGACCAGGCCGTCTTGCTCCAGAGCTCGAAGACCCCAAGACAGCCC
TCTGCTCTCAGCGGCCACAGAGAGCCTGGGCTCAGCCTTCTGCATCAGGACATGGCCTCGTCCACTGAGGGCA
CGATTTAAACATTTGACATCAGAAGCTTTATTTGTAAACCTCACACAGATAAGGACCAAGGGCTGGCGGTGTGGC
CAGAGGACAGGGGAAGCTGAAGGCCCGTGTCTGAGCTCGGCAGTCCCTGCTCCTTGCAGTGAAGCCACCATGGGT
GACCGTCCAGCCTCACCCGGTGGCCTGCACAGTGAGGGAAGGGCTTCAGGGCCATCTGCTCCAGGGCAGGGGAC
AGGCCACCAAGGACCTTTGGCAAATGAAGGTTTACATTTCTGTAGTTTGTGTTTGTGTTTGTGTTTGTGTTT
TTTTAGCTATTAAAACCATTTGAATTTTAAACGACCTGATGAGGGCATCAGGTAAATTAAAGGATTTTGGGAAGA
TTCTTATTTTCAATTCTAATATCTGACAGATGCCATCAAGAATAAGCATTAAAGGTATAAAAAATACTGTGTGTAT
AAAACAATGCCAAACCACATTCTACAGCAAATGCACTGTGCCATTTATAACCCTGACATCACCTCCCAAGGCTC
TCAAGGAAGATTTATTTTAAATAACTTAAATAGAAGTCCTAGATGATATTGTTTAGGAATTTAAGAGGGTGGTGG
ATATGGTCTGTGAATAGCACTTCCCTGAAGCCAGCTCATGGTCTGTTCATTGGTTTAAAAATGAGCTTGTAT
TTTGAGAAGCCCAACAAAAAAGTGATAAAAGTGTTGTTGGTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNGTCATAAGACTACTAGTAAAAAATGTTCAATCAATGCCGTCACAAAGACAGTACAAAAACCAAGTGCCCAAT
AGAAGGAGCAGCGAACTTGCCCAAACAGAAAAGCTCTAAATAGAACTTTAGTATATACAAAACCACTCGGTAGAG
TTTTAGAAGTTTCTTCCATGTAAGTGAAGCATCTTGAGTCACTCAGACTT

1527/1629
FIGURE 1380

MANSGPNSNRSQFFITFRSCAYLDKKHTIFGRVVGFDVLTAMENVESDPKTD RPKEEIRIDATTVFVDPYEEAD
AQIAQERKTQLKVAPETKVKSSQPQAGSQGPQTFRQGVGKYINPAATKRAAEEEPSTSATVPMSKKKPSRGFGDF
SSW

1528/1629
FIGURE 1381

GAGGCTTTTCAGCCTCATTGAGGTACAGTTACATATCTTTTGCCCTTTTGCCCCGTGCATAGCTATCTACAGCC
AATCACAGATCACAGAGTCACTGGACTATAGAGCTGGAAGGAAGCTCAGAGACAATGCCAAGGGGGCAGAAAATT
TATCAGAAGCCAGTCCCAGTGCCTTTCCCTCCATTTCTTCTGCAGGAAGACTATTTTGGGCTGCCTGAACATTGT
ATCAAACCTGCTACCTATACTATGGTCTACCTTTCCCTCCAGTGGAAATTACAAAGGCACTAACTGAAATGCCTTCT
AGAAACAGAGAAAAACGAACTGTACTTATTTACTCTTGATACACAGATTATTTATAAAACAGATTGAAGTAACCT
GTTAACTGGCAAAAAGAGAATGAGATCGGATTTAAATGTATGGCAGTAAGTCCTATTGATCCCTCCAGTTATCTC
AGTATGACTGCAGTATATTCATTCACTAAAACCACTCACTAGATACCAACTACACATCTGGCACTGCAGATGTAA
AGGTCAGTCACACATGTTCTGACTTTACAGAGTTACAGTAGCAGTGGAGGATGATATATGTGGAACAAAAAG
GCATTGATTCTATTACAGAGCACTGTTAGGGCTCAAAGGAGAGAGGGGTCTTTCCACCTAAGAAATGAGGAATAGG
GTCATCATAGAAGTGACCTTAAGTCTTAAAAATTAAGAAGGGGATTCCAAGCTGCTTCAGACAGAGACACATCGA
GCTAAAACACAGAGGTATGAAAGAGCACAGGGACTTTAGGAATTGCACAGTTTCACTAACAGGAACAAAAGGCT
CAAGGGGGGCAAGAAATGAGGCTGTATGGAAAGAGATTCAATGTAAGCACTTTATAAAATAGATTAATTTCTGAT
TCAATGAAGCATTCTTGATCATTGTGTACAAGGCACTACATGCATCATGGAATAATCATTAGGATGCATTGCCA
GCACTTGCAGAACTGATATTATTCAGCCTCAAGCTTTCCAGTGGCCAAAGGGAAATGCTGACTGCTTTTCATATA
TTTGAGTCAAAGATTTTTTATATGGTCAATGAAGACTAATATAAGGGCAGTGGGATTTTCACAGATGCATGCCAT
GTTGTGAGAGCCTCTTAGATTTTCTCAACTGTGAGAAAGAAAAACGAAATGTTGAAGACGTTGAGTCTGGAGA
GGGGATACTAATCACTGTCCAGTTGGGCCTGGTGGGAATGGGGAAATGGCACAGGAATGCAAGCCTCTCCACCC
TACCCCCGAACTCCAGCCATACACTCATCGTTTACAAAATATAAATGAGTTAGCATTAAATGTTTCAGAGTAA
ATAATTCCTTTTCCCGAAATGCATGAAGATAGAGTAACAGACTTCTCACACTGTATTTTTAGGGTATGGAGAATT
TAGAAGGTTAAAGAATTACTGCTTCAATTTTTTCACTTAAAAAAAATCAGGAAGCTCTGTTTATTAGGCTATGC
ACCATGTGCACAGTCAAGAATTAGCAGAAACCCTCTGCATTTACAAACACTTGTGCTATAAAAAAGTAATTTTT
AAAAAGCCACGTGTGTGTGTGTGTGTATATCNNNNNNNNNNNNNNNNNNTCTAACACGCCAAGGTTTTTGATACTT
TTTTACAAAACTACAAGAGAAAACAAATATACCTGTCCAAACCATATACTTTTAAAGAGCATTTTTTTTTCCA
TACAAGCTGTTGTTAATTTGGGGGTAAAGTGCTGATTTGCAAACCTTCATCAAATTGTTCCCAAGTGGATTCTCCT
TGTTTGCTCCCCCTACCAACCCCAAAGTTACCATATTTGATGTAAGAATCAGGCATGTTAGAATGTTGTGTCAC
ACTAACTGATTCTGCTCTTTTTGTCTTGTCATTCAAGTTCCGTTAGCTTCTGTACGCGGTGCCCTTTGCAGTCTG
GTGTCTCTTCCAGAGGCGAGGGGGCTGAGGATGGGGTGCTGCATCTCACTAGCTATACTGGCATCATCTTGGTAA
ACATTCACTCCCATGCCATTGGGGTTGCTTTTGCCAAGGTCATCCAGGACCTCCTCGATTATAAATCTGGTAAAC
ATTTTCAGTCTTGCTCTTTCCTTGACCTGAAAGCTTTACAAAAAGTACCAATGCCCAGGTCCAGCGCTGGAGATNN
NN
GAGAATTACTGCTCGGTAAGTGGGATGACTGGGGAGTGGGAGATCAAATACTCTAACGTCTCCAGCACCTATTTC
TAGAGATCAGTGGGGCAGAAAGGTAGAAATAAAAGGTGGAAGGGATGAAATGGGTAAGTGTGGGTGAATTAGTT
CCAGGAAAACGGCAATCTCCACTGTGGATTAGGGAAGGCGTCACTGAGGAGGGCTTTCTTAACAGTTCAGGTCA
GTGGAAGCCAACTTGAGGCACACATCGTGCAGGCGCATCTCCGGGGAGGTCGGGTCAATTTACCCCATTTTACTG
CCGAGATGACCTAGGTCCAGAGACGGTAAGAGCGGTGTACGACTCACACAAGTCGGGGGTCTGTGAACCGAGG
TTGAGCCTGGCGGGCCTTCGGCCCGAGGCTTTAAGCGAAGTACCAGACCCGGGGTTCAAAGCCCAGAGGTAGG
CAGGCGGCTGGCTCTCCGCCTCAGGCCTGGAGAGAACCCAGGGGTATGAACCTCAACCTCGCTCCCGCGTCCAGC
TGGAGGGGCGGAGCTGGCTGGCCCCGCCTCCGGGTTAAACAAAGTTCTTTACAGACTAGGCGTGAGGGGATGTTG
CAGTCTTGTGCCACTTCCGGGCGAAGAG

1529/1629
FIGURE 1382

GFSASFEVQLHIFCLLPCCIAIYSQSQITESLDYRAGRKL RDNAKGAENLSEASPSAFPPFPSAGRLEWAA

1530/1629
FIGURE 1383

GCCGCATTCCCGGTGTCGACTTACTAGCTGCAAGCCTCTGCCTGCCTTCCTGCGCGCCGTTCCCCGCTAGTCGCT
GCTGCTGGCGCGCACTCGCCGGGTTTTTCCTCCACGGCCTCGAGATGGTGGTGAATGTGGCACGGAGGAGCCGG
GCCTTCCAACCCGGTGGGCCCCGAGCTCCGAAAGGCCCCCTCGGCAGTGAGAGGGGCGGGAGCCCGCGGGGGCCGC
GCCCTTCTCTCGCTTCGGACTGCGCAACGCTGCGCTCTGGGCTGACAGGCGGATTAAAACGGTCCCATCAAGACTG
AGAAAAAGCACACCAGCTATTGGCACAGCGTGGGCAGTGGGGCCTACAGGATGACTGACTTAGTCTACAGAGATC
CCGGCGTACTTAAGCAGGTAGTAATGATGGACAGATGAAGACTCTTAAGATGACAGAAGGTGATTTTTCTGGTGA
TCGAGGACTTCCGGGGTAATGACAGTGATGAAATGCAGGGGACCTGGTTGCCCCAAGTTTCCTGGCAGTGTGTG
ATACTGAGGAGGTGAGCTTGTTTCTGGAGCTGTGCTTTAAGGTAAAGTTGATCAGCTTAATCCTCCTGATCCCTT
TCCCATCGGATCTGAACACTGGTCTTGGTGGTCGTAAAAGGAGGAAAAGTAATAGTGAAGCTGGCCTAAATGTTG
TAATCTGGTATATGGCATGTGGGCTAGTTTCAGACAGGTTTCAGAGATGGTTGGATCTCTGAAATTGTAAAATGA
AGTATAATCTTAGGCTAAGGGAAGGATGCGTGTGAAGCTCTGGAGATTGATGTTACATGTAAAGCTGTCCTCATT
TGTGACTATGGACCTATGGAGTTGGGACAATCTCTATGGGAAGCAGAAGGCAAGGACCCCGGTCATTTTAGGTAG
AAACAACAGCATGCTAATGCAAAAAATTATGCAGTGTGCTACTGAACCTTCAGAGGTGATCAATAAAAGAAGAATA
AAAAGACT

1531/1629
FIGURE 1384

RIPGVDLLAASLCCLPSCAPFPASRCCWRALAGFFLPRPRDGGECGTEEPGLPTRWARAPKGPLGSEGGSPRGPR
PSLASDCATLRSGLTGG

1532/1629
FIGURE 1385

GGCTCCTCCTTGAGGGAGAGAGCTGAGGAGGTGGCATTCTTGCTTCCCTGACTCACCCAAAGGAAGATTTCACAG
CCCCTTGGCTGGGTGGGGAGTTATGCTGGGAAGTCTTCCAGGCCCCCTGGGGGTGGGAAGATGCTCAATGTTCAA
AGGAGATGGAACGAGGAAAACAGTTAAGCAACGATGGACTCCAGGGGGAAAACCGGAGAAGAAGAACTGTAATT
CCAGTCCGTCCACATGGCCCAGCAGTGAACGACAATTGCATGGTCAGAGAGAGCAAAAGCACCACGCCGACTGAA
AGCAGCTCGAATGTGGTGGGGCAGTGGGAGATAATGCCCTCATCTACCAAACAAGATCTGCCACCTTCGCAGAC
CACTAAACCTCATTCCTCCAGCCAGCTCCCCACCCCCATGAAGGCCAACTGACCAGAGAGCAGGGCTCCCGAGGG
TCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGT
TTGCTGTCAAAGCATGCGACTCTTCTTTCTGATACTTGACATATTTCTTTTCCCGTTCAATTCATGGTTTCTGCC
CAAACGGAGCCACGTGAGGACGTCTTTGGGGATGTGTCTCCAAGAAAAGTGTGGGCTGCCTTCCTCACCCCTGGAT
GCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCAGCCTTC
CTCACCCCTGGATGCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCAGCCTTCCTCACCCCTGGATGCCTG
TGGGCAGCCTTCCTCACCCCTGGATGCCTGTGACTTGGTTTCCATGGGGGCTTCCTAAGCTCAGGGACCCCAAGCC
TCCATCAAATCTAATGACCCGCCTTGTCTCTGAACACACCTGTGTTGTCCCCGAGCCCCCTACCAACCCCTCTG
CAACCCGGCCCCACGCATTTCCCATCCTGAAGGGTCCAGCTCATAGGCCGGCCCATGTGTTCCCTTTACCCCTGCT
TTGTCCCTACCTGGTGGGGAGCTGTCCCTTCTGGGCCCTAGTGTGGCCTTACACACAAATGTGTCTGTGGGT
GGTATCTGGGCCTCCCCCTGCAGTGAGGGGATTGACCAATGTGCAGAGCTCACTGGGCCTGGATATGGGCTCGGGT
GGCACAGAACAGAGAGAAAAGTGCTCCGTAAAAGTGAGCTGCGATGCGGAGGTGGGCAAGCTCTTCCCTGGAGGGG
GAAGAGCTCTCAACCCAGAGGGATCTGACCAGGAAGGTTACCCCCCTCCACCCAGGAAGCCCTGCAGACAGT
ATGTGTTTTAGGCTTTGCTGGCCAAATGGTCTCTGCCGTGACTACTCAGCTCTGCCATTGTGGCTGCAGAGTGAC
CATAGACCTTCTGAAAGTGAATGAGTATGACTGTGTTCCAATAAACTTTATTGACAG

1533/1629
FIGURE 1386

MRLFFLIIDIFLFPFNSWFLPKRSHVRTSLGMCLQEKCLPSSPWMPVGCLPHPGCLWAAFLTLDACGQPSSPWM
PVGCLPHPGCLWAAFLTLDACGQPSSPWMPVTWFPWGLPKLRDPKPPSNLMTRLVSEHTCVVPEPLTNPLCNPAH
AFPILKGPAHREPAHVFLPLLCPYLVGSCPFWALVWHFTHKCVLWVVGPPPAVRG

1534/1629
FIGURE 1387

TCGCATTTCTGCAGTGTTTGCACTCTCAGGCCCCACCATTTCCTCCCGCATCTCTTAGGGAGAAGTTCTCGACGTCC
CACCTCCCCTGGAAGGGTGCTGCTCCCAGAGACCTTCAGGCCAATGGCCCAATCTCAGTGCCCTCAGGGGAGAGG
GGGGTGCAGAAAAACAGCCTGGGTACAAAAGAGGTGCGAGGGCTGTGAGATCCCGGAGGCACCGACGGGAAGCG
AGACGGAGAACAGGAGGGCAGGACGGGCTGGAGGTGGGGGATACTGCAGATGGAGGGAGCCACGGTGGGGGAGGG
CGTGGACCTGACCGTCTCTGGCACAAGGCGGTTCGGGTGCAGACCTCCAGGCCCTCCGGGTAAAGGTGCCGCCAGG
GCCCCAGGCCGGGGGCGCACGGAACACAGGCAGGGTGCCTGTGGAGGGACGGGGAAAGCGGGGCGGGTTGGG
GAAGGCGCCCCGGGAACCTGAACCTCCACCCCCGCTCAGTCTCGACCACTCCTTAAGCCCCACCCGCCCCAGG
TAAGGCGCAGTCCACCCCCATTCCCAGTAGATTAACGCACAGGTGGGGGCGCGCTCGGGACATAGCTGCGCTAGG
GGACAGCGCGCCAGCCAGTTCGCGGGGGCGAGGAGCAGGGCGGGGCCAGCAGGAACCCAGCTTTGTTAGCGAT
GCTCCCCGTGAGCCACGCGCCACGCGTACGCGCTTCTCAATGGGGCGGGCGTGGAGCCGCGCCCTGCGCGATT
GGCCAAACGGGTGGCCACGATTGGCTGAGACCTGGCCCCGCTCCTCGGCCCCAGGAGGGTGGGGCGTGGGT
GTGGGTGCGCGGCGCTGCTGCCCCGGGGATCTTGCGCGCTCCCGAACAGCCGTGTTGTGCGCCAGGGCGCG
CCTTCCCTCCACAGCGCGCTGCGCGTGCAGAGGTCTGGCGCTCTTGGGACTGGCGGGGCTGCGCGCGGGGT
TAGGGTGGGGGTACGGGAAGGCTCAACCCAGGACCTGCGTACCTTGCTTTGGGGGCGCACTAAGCACCTGCCGGG
AGCAGGGGGCGCACCGGGAACCTGCGAGATTTGCCAGTTGGGCGCACTGGGGATCTGTGGACTGCGTCCGGGGGA
TGGGCTAGGGGGACATGCGCACGCTTTGGGCCTTACAGAATGTGATCGCGCGAGGGGGAGGGCGAAGCGTGCGCG
GAGGGCGAGGCGAAGGAAGGAGGGCGTGAGAAAGGCGACGGCGCGCGGAGGAGGGTTATCTATACATTTAA
AAACCAGCCGCTGCGCGCGCTGCGGAGACCTGGGAGAGTCCGGCCGACGCGCGGGACACGAGCGTCCCACG
CTCCCTGGCGCGTACGGCTGCCACCCTAGGCCTCTATCCCCGGGCTCCAGACGACCTAGGACGCGTGCCCTG
GGGAGTTGCCITGGCGCGCGCTGCCAGAACCCCCCTTGGGGCGCCACAGTTTTCCCGTTCGCTCCGGTTCTCT
GCCTGCACCTTCTGCGCGCGCGGGACCTGGAGCGGGCGGGTGGATGCAGGCGCGATGGACGGCGGCACACTG
CCCAGGTCCGCGCCCCCTGCGCCCCCGTCCCTGTGCGCTGCGCTGCCCGGCGGAGACCCGCTCCCCGGAACCTG
TTGCGCTGCAGCGGCGGCGGCGACCGGCCACCGCAGAGACCGGAGGCGGCGCAGCGGCCGTAGCGCGGCGCAAT
GAGCGCGAGCGCAACCGCGTGAAGCTGGTGAACCTTGGGCTTCCAGGCGCTGCGGCAGCACGTGCCGCACGGCGGC
GCCAGCAAGAAGCTGAGCAAGGTGGAGACGCTGCGCTCAGCCGTGGAGTACATCCGCGCGCTGCAGCGCCTGCTG
GCCGAGCACGACGCCGTGCGCAACGCGCTGGCGGGAGGGCTGAGGCCGCGAGGCCGTGCGGCCGTCTGCGCCCCG
GGGCCGCCAGGGACCACCCGGTTCGCGCCTCGCCCTCCCGCGCTTCTTCGTCCCCGGGCGCGGGGGCAGCTCG
GAGCCCGGCTCCCCGCTTCCGCTACTCGTTCGACGACAGCGGCTGCGAAGGCGCGCTGAGTCTTGCAGGCGC
GAGTACTCGACTTCTCCAGCTGGTTAGGGGGCTACTGAGCGCCCTCGACCTATGAGGTAACAGCCGGGAGGCAG
GGAGGAGGGAGGGCCGGGGGCGGGGTGGAGGGACGGGTGGGCAGGCCCGGCGGGTTCGCGCCCCCAGGAGCCCG
CGGAGCCGAGCGCCAGGCCCGAGCGATGGCTTCGATTTGCTCACTCTTCAATTTCCCCCAAAGTTTTTCAAGCCC
GTGCAAGACCGCGTTTGTGTTGTCGGGATTGCAAACTTCCCCCTCGCGGCTCAGCCGCCGACGAGGGAGGGGTA
GACGAGGGGAGGGGAGCGGCCGTGCGGCCGTGAGGTCTCTAGTGCTGGCGGATCCTGGGGCAGATTGGGGTGCT
GGAGGCGGGGTGACTTTGCATTGCAATCGCGCTCCCGGGCCGGGGCGGCAGAAATGAGTCGGCGGGGCGCGGAGC
CCTGACTCACCGCGGCTCCGAGCGCCGCCCCGCCCCCGCGTGTCTCAGACCGAGTCGCGGGACCCACGGACTC
AAGACTCCAAAACCAACCGAGCAACGAACTGCCGAGTTTCGCTTGGGGGAGGTGCGGGCAGGGCCGGCCCCGGG
GGGGTCTGCCCCGGGCGCGCGCGCTTGACGCGCGTTTGGTTCCCCACCTTCCCCCGCAGCCTCAGCCCCGG
AAGCCGAGCGAGCGGCGGCGCGCTCATCGCCGGGGAGCCCCGCCAGGTGGACCGGCCGCGCTCCGCCCCAGCG
AGCCGGGGACCCACCCACCCCGCCACCGCCGACGCCGCTCGTTTCGTCCGGGCCAGCCTGACCAATGCCGC
GGTGGAAACGGGCTTGGAGCTGGCCCCATAAGGGCTGGCGGCTTCTCCGACGCCGCCCTCCCCACAGCTTCTC
GACTGCAGTGGGGCGGGGGGACCAACACTTGGAGATTTTTCCGGAGGGGAGAGGATTTTTCTAAGGGCACAGAGA
ATCCATTTTCTACACATTAACCTTGGAGTGTGAGGGGACACTGCTGGCAAACGAGACCTATTTTTGTACAAAGA
ACCCTTGACCTGGGGCGTAATAAAGATGACCTGGACCCCTGCCCCACTATCTGGAGTTTTTCATGCTGGCCAAG
ATCTGGACACGAGCAGTCCCTGAGGGGCGGGTCCCTGGCGTGAGGCCCGCGTGACAGCCACCCTGGGGTGGGT
TTGTGGGCACTGCTGCTGCTAGGGAGAAGCCTGTGTGGGGCACACCTTTCAAGGGAGCGTGAACCTTTATAAA
TAAATCAGTTCTGTTTACCAGTGGCTCCTATCACCTACACTTCCAGGTGACGGCCAGACTTCCGTGGTCACTAC
TCCTCAAACCTGCTGCCTCCTCCGTAGGGTGGGTCTGGGTGAGATCTGG

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FIGURE 1388

MEGATVGEVDLTVLAQGGRVQTSRPSGLRCRPEPSGRGRTEETTGRVRVEGRGKRGGGLGKAPREPEPPTPPQSRP
LLKPHPAPGKAQSTPIPSRLTHRWGRARDIAALGDSAPSEVAGARSRAGPSRNPALLAMLPVSHAPRVRASSMGF
GVEPRPARLAKRVAHDWLRPWPPPPRPQEGGAWVWAARRVLPPGILRASRTAVLSPGPRLPSHSARCACEGLAAL
GTGGAARGVRVGVREGSTQDLRTLLWGRTKHLPGAGGAPGTRRFRLGALGICGLRPGDGLGGAHALGLTECDR
ARGRAKRGGRRARRRKEGVRKATAAARRRVIYTFKNQPPAPRLRRPGRVRPHARDTSVPRSLARTACHH

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FIGURE 1389

AAGCTTTCCTCTTTGCAATTTTGGCATTGAAAACCTCCGAAGAGCGGTTTTTGTTTTTTATTTAAAGAAGATGATA
CATATGTGTACCCGATTCAAAACTAGAGAATAGAATTTAAAACATAATTTTCAAAGTCTTCAAATATGCCTAAAG
GTAACAATGTCATCTTTTAATTGCCAATTTCTCTACCACTTTCAAAAAATTACTTCCAAGGATTTAATGAGCTCC
TTCCTTTCAACAGAAAATGGACTATTTTCCTTTTCAGATTTACTATATGCTGTCACCTCCAGCTTTATAACCGCATG
TGCATACACAAACATTTCTTTCTCTCTTGCAGGTGGCACAACAGGAAGGGGAAATCTGTGGTTTAAATTCTTT
ATGCCTCATCCTCTGAGTGCTGAAGGCTTGCTGTAGGCTGTATGCTGTAAATGCTAATCGTGATAGGGGTTTTTG
CCTCCAACCTGACTCCTACATATTAGCATTAACAGTGTATGATGCCTGTTACTAGCATTACATGGAACAAATTGC
TGCCGTGGGAGGATGACAAAGAAGCATGAGTCACCCCTGCTGGATAAACTTAGACTTCAGGCTTTATCATTTTTTCA
ATCTGTAAATCATAATCTGGTCACTGGGATGTTCAACCTTAACTAAGTTTTGAAAGTAAGGTTATTTAAAAGAT
TTATCAGTAGTATCCTAAATGCAAACATTTTCATTTAAATGTCAAGCCCATGTTTGTTTTTATCATTAACAGAAA
ATATATTCATGTCATTCTTAATTGCAGGTTTTGGCTTGTTTCATTATAATGTTTCATAAACACCTTTGATTCAACTG
TTAGAAATGTGGGCTAAACACAAATTTCTATAATATTTTTGTAGTTAAAAATTAGAAGGACTACTAACCTCCAGT
TATATCATGGATTGTCTGGCAACGTTTTTTAAAAGATTTAGAACTGGTACTTTCCCCCAGGTAACGATTTTCTG
TTCAGGCAACTTCAGTTTAAAATTAATACTTTTATTTGACTCTTAAAGGGAACTGAAAGGCTATGAAGCTGAAT
TTTTTTAATGAAATATTTTAAACAGTTAGCAGGGTAAATAACATCTGACAGCTAATGAGATATTTTTTCCATACA
AGATAAAAAGATTTAATCAAAAAATTTTCATATTTGAAATGAAGTCCCAAATCTAGGTTCAAGTTCAATAGCTTAG
CCACATAATACGGTTGTGCGAGCAGAGAATCTACCTTTCCACTTCTAAGCCTGTTTCTTCTCCATATGGGGATA
ATACTTTACAAGGTTGTTGTGAGGCTTAGATGAGATAGAGAATTATTCATAAGATAATCAAGTGCTACATTAAT
GTTATAGTTAGATTAATCCAAGAACTAGTCACCCTACTTTATTAGAGAAGAGAAAAGCTAATGATTTGATTTGCA
GAATATTTAAGGTTTGGATTTCTATGCAGTTTTTCTAAATAACCATCACTTACAAATATGTAACCAAACGTAATT
GTTAGTATATTTAATGTAAACTTGTTTTAACAACCTCTTCTCAACATTTTGTCCAGGTTATTCAGTGAACCAAAT
AAATCTCATGAGTCTTTAGTTGATTTAAAAAA

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FIGURE 1390

MSSFLSTENGLFSFQIYYMLSLQLYNRMCIHKHFFLSCRWHKPGRGNLWFKFFMPHPLSAEGLL

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FIGURE 1391

GGCCTCCGCCGCCGCTCGGGAGGTGAGGACGAGGAGGAAGCGAGCAGCCCAGACAGCGGCCACCTCAAGGATGG
AATCCGACGTGGTAGGCCCAGAGCAGATACTGTCCGCGATTTAATAAATGAAGGAGAGCATTTCATCCAGCAGAAT
CCGTTGTAACATCTGTAATAGGGTGTTCACGGGAGAAATCGCTCCAGGCTCACAAAAGGACTCATACAGGTGA
GAGGCCCTATCTGTGTGACTATCCAGACTGTGGAAAAGCCTTTGTTCAAAGTGGACAGCTCAAAACACATCAGCG
TCTTCACACCGGAGAGAAAACCTTTGTTTGTTCAGAAAATGGCTGCCTGAGCAGATTACCCATGCAAACCGCCAC
TGTCCGAAGCACCCCTACGCCAGGCTGAAGAGAGAGGAGCCACGGACACACTCAGCAAACATCAGGCTGCCGAC
AACAAGGCCGCGGCCGAGTGGCTGGCGAGGTATTGGGAAATGAGAGAGCAGCGCACCCCCACTTTGAAAAGGCAAG
CTGGTTCAGAAGGCTGATCAGGAGCAGCAGGACCCTCTGGAATACCTTCAGTCTGATGAAGAGGACGACGAGAAG
AGAGGGGCCCAGCGCCGGCTGCAGGAGCAGCGGGAGCGCCTGCATGGAGCCCTCGCGCTCATAGAGCTTGCCAAC
CTGACTGGGGCGCCACTCCGACAGTAGCTTGGACACTGACTCTTCCACTGTACAAAAGTACTGCCCAGCATACTT
AAAAAGTAGATCCTTGGGCATAAGCTAAGCACCTTATTTGCTTATCATAGGCTGCTATTCTGTAGAAAATTTATGA
AGAATGTTATTGCCCCAGAATATGGGGTGAGAGAGAACTGCACCTTTTTTAATATGGAAATGAATTCATCGTAAAG
TTTAAATATTTTTGTAAATATGGACTGCACAGTACAGGGTAGAAAACACTACATATTGTGGGAAGCTAGATTTTGCA
AGTTTAATGCATTTCATTGGAAGCAGTTCTCACAGGAAGCACTTTCTGAATAAGACACTTGTGTTGAAAAACAGAAT
GGTACAAATAGCCAAAGAAGATTAAAACAGATTATTTATAAGATCATTTTTAACAATATATATTAGTATGTTTAA
CAATACTGTAAACACTGAAGCAAGCAAGAAAGTATAAAATATGTAAGATAGATAATTTTAATTGCAAAATACTGT
GCCCACTAAGGCTAGAGAAATGGGAGGCTATTTTGGAAGATGTTCTAAGTAATGGACTTAGAAGAAAATAGATAT
TTGAGGCTCTTGGAAGATGCACAATAGTTCAGAATTTTGAAATTGGAGCAAAATCAGTCTTATTCTATCTGGG
GCTTTACAACCTCAGTATAATGTTTAAAGTTTGAAAAGCACTTGTCATCCCTAGCATGTTAACTTGGGAACTTTTGC
ACATTTTCATATTTCTCATTTGCTGAAATTGAGTGATTAATCTTGCAAAGTCTAGGTAACATAGTAATTGGTAATT
TTAAAAATACATATTAAGGGCCCTGTAATGAGATTGGCACTTGGATTTTACTAAAGGGACACCTGCAGGGTTG
TTTTGTAGTGAAATGTTTATAGATCTTTGTGTAGCAACACTACATTTTAATTGTACTGCTTGTGTTAGAAATTATTA
GCAAATGGAAGCCTCCATATTTATATTTTTCAGTGCATAAAGCCACCTTCTTGCTTTACTTCAGAGTAACATGCCA
AGCTATTTTGTGTTCACTAAATTTAGCTATCAGTTAAACACTGCAGAAAATATTAGCTACTCAAATAAGTAGGCT
TCTGAAATAGTTTAACTGCAAGTGTGTTAACTTGTGTGGTGGTTTGAAGCCATTTTCCAAATAAAGTTATTAA
ACACCACCTTTATGTACTGAAGCATGAACAGAAAAATCAAGAGCTGAGCAGACCACCTCCTTTATGTAGGCAAAAC
TTCCATCATTTTGGCTTTTGTCTAAACAGAACTAAATGACATGCATAGCATGGTAACCTTACAGATCGCTTAATT
GGAGTAAAACTCAGAGTAATAGAGGGAAATATGGGCTCTTCAGTGCCTTTTTAGCTTTTTTGAGTTGAAGACGTT
CCTACAGATGTAGTTTAAACATTACAAAGTAGGCTTCTTTATCCAAAAATCCCAATGTGTCATAGTACACAGATA
GTTTAAATATGTAGCCACGGGGGAAGGGGAGGCATGTAAATGTCTTGAAGAGGAGAAAAAGTATGAAAGAAGATA
CGATAGTTACGAATAATGTGTATGATGAGGACATACTTTAAAAATGTAATTCCTCTGTACAGTAAATTACAAATC
TTTAGGGATTTTTTTGTAAATAAGAGAATTTATATTTGTAATGGTCTAAGAATTTTTTTGTAATGTGGTATATAGA
ATTTTAAATTTGGAGCACTTATAAGCTGGTAAGAGAGACTATAGCATCTGAATTATCTTGGTTTATGTTTCAGCAT
TTCTCTAGAATTTTTTGCTCTCAAATATGTGATTTAATGAACATAAAACAACACTCATCAGTCTTGGGAAATTTG
AACTTTGATCAACTTAACTAAAGAAGGAAGGGTAGTAAGAATTTTCAAATACAAATATTTGCCAATTCACAGAT
GATAACATTTAAGGCCTTCAAAGTAAGGGTTTTTCCTTGTTTCTCCAGTCAGCTTTTGTCAACTCTAATAGTTT
TTTCATAAACATTTTTTATTTGTATAATTGCAACAGTTTAAAGAAATTATCACAACTATTTAGAAACATTTAAAT
GTTCTTTTGTATATAAGCTATATACTTGAAAAATACATTGGTATCTAAAATTTGAGGTGTGTTAAGACTGCTTT
TTGTTTTAAAAAATGGTTTACATTCAAATTTTTGAAGTGTTTTATGCTTCATATGGCTAAGTTGTAGTTTGGCAG
AGTTAACAGCATAAGAATAAACATGCTGTAATTTTAAAGATGCTTTGAATAAAAAATTTATTTTAAATTT

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FIGURE 1392

MKESIHPAESVVTSVIGCFHGRNRSRLTKGLIQVRGPICVTIQTVEKPLFKVDSSKHISVFTPERNLCLFRKWLP
EQIHPCKPPLSEAPLRQAEERGAHGHTQQTSGCRQQGRGVAGEVLGNERAAHPHFERQAGSEG

[illegible]

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FIGURE 1393B

ATTGAGATTTTGAATCTTTTTGGTACCTTTTGGTTAATGACATAGCCTCCTGAAATTCTGGATGTCTTCAAAGTC
AGTTTTGCTTCTTTATCCTGAAAATCAGATTACAAATGCTGAAGGCATTTCTTGGGCCCAGTGTAGCTCACGCAA
TCTCTGCTACCCATAAGCCTTGATGAAGATGATACAGTCCGGACTGTGAGCATGGTGCTTCATGTATATGTGCTG
CCAGTAACAAGAATTTTTTTGTTTTGTTTTGTTTTGATAAGGCATAAAAGAACTCATTCTTGGACATCA
ACTGTAATTCCATCATTCCATGTCTGCGGATACAGACAATAAAAAAATGTTGTGTAGTCAGTACTAATTACTGA
CATTATAAGCATTCTCAAATGCAATAAAAAATGCTGGTTGTTTCACGCTGGTAGTAAAAGTTGCCACAGCCTAAGTT
TGTTTCCCTTTCTGACCTGCTGATATTGTATGTTAGGCATATGCCTTAGGTTTATCACCAGCTGCTTCCAATGCA
GAATTAAAATCAATCTTAAAGCTTTCATGATCAGGGAAGGCTGAAGCTCTTATCCTCAGGATTTCCAAGTGAAAG
TATCCACTTAGAGAATTGGGAAGTAAAAAAGAGCAAGAGATGTTATCTTTTCTCTTGAGGAAGCACACTCT
TATTTTTTTCATCAAATTTTATAAAGAAAAACAAATGTTAATAACTAGCATTAAAGAGCAAACATAAAATTTTCAG
AGGAAAGCAACTTTCATGAATAATTCATTGAAAGATTTTCACAGTCTGGCAAGATTAGGTCATCCAAATAAAAGTG
CTAATGGTCAAAAACATGCACCGTCTATAATATTCTCATCAAGAAATCTTTTTGCATATAATGATAAATGCTTAG
ATTAGAACAATGATTTTATAAAAAATATTCTATCAAAAGTATGCTAGATAATTGCATTTCATTGAAGAAAACAGAA
CTTCAGTACCTAAATATTCAGAAAAACCATCTTAATTTTGGAGATTTTAAAAAATAATTAGATGCATTTAGGAA
ATGTGCTGTTTCTTTTTAATATTACTCTATAGTATATATTCTAGGGATTAATGAATTTGAGCATCACCTTTCAAT
AAAAAATTAATTTGCCAATATGAAAGCAGTATTTAAGTGGCCAAACCGTGGTAACATAAAACCATTACATATAT
AATTCAGAGCACATAATTCAGGGCAAAGGATGACTTGAAAATTAACCTCCAGTCTTTATTCTGCAAAACACCCA
CCGATGCTGAGGATACAAGTGAACATTCTTTCCAGCATTGTTTTGAAAAGCCCATATTAGCAAAGTNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNAACAAGTAGATTTTGCTATTAAGTTGCAAACCTAGTGTCTCTTTGAATTAACAA
TTATGCCCTATCTAGAAACCCCTTAGTCTCAATAATTAGCAAAACATTTGAACCTTTAATTCTCACCTGGCTACT
GAGACTATAATCTTAGGGTTAATTCAAATTCCTGTAATTACCAGGCTTAAACCTAAATACTGCTTACAGCCTATC
CATTAGTAACCATTTAAAAATGTACAGATACTTCTTTTAATCAACTGGAGGACCTAAACCAAGTATGACGATATG
TTAGTGAAAGATTTTGCTGGTTGAGGCATAGTACATTTTAACTTATATTTTCAGGAATTGTTCTCAAGCAGGAACAC
TCTTTTACATATTTATTTTCAGGCTTGTCACCTCTCATAAACGAGGCAGCAAACCCAAAATATTGGCTCTTCTTATA
AATAGGCGCCTTTATATAAAGAACATAAAACTCTTAAGACTAATTTACACCAACACAGGCAGCTTCATAATAGT
AACCACCTCTCCCTCCCCACTAAAAAAGATAAAAAACAAAGTATAATTAGTCTTTCTTATTAGATTTTTGTCTTTG
ATGATATTACGTATTTATGTGTAGGGTAGTAATCACAATTTATCCTTCATCTTCATTGTAGTTGAATCAAATAAA
AGTATTCTTTATTCAAATAATGTGAAGTTGGGTGTCTCAAACCTTCATTTAATGAATTGATGAAAGGTTTAAGAC
AAAATTCACGTTGGAGGGAAATTAAGTTACATACAAAAACACTGGTTTTAACTGTGGGACAATATTTGGATTAGA
AAACCATCTCTAGATATAACCTACTTATATTTATTTTAAATGGTATTTTATTTTTTAAATAACAAACCCAAT
GTTGTCTTATTTCCACTTTGATTGTAAAATGACATTCAATGCTTAATACCAAAATATATATCTATATTCACATTT

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FIGURE 1394

FQLGWRPLCVYWGEGLKNNYPKLFNVLPXXXXXXXXXHYTILSSDLRPPFGPMASWRLKVFC TL

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FIGURE 1395

ACGAGGCTGAGCGGGACCTGCGAGCAGCGCGGGCGGCAGCCCGGGGGAAGCGTCCGGGACC**ATG**TCTGGAGAACT
ACCACCAAACATTAAACATCAAGGAACCTCGATGGGATCAAAAGCACTTTCATTGGACGAGCCAATCATTTCTTCAC
TGTAAGTACCCAGGAACATTCTGTTAACCAACGAACAACCTCGAGAGTGCGAGAAAAATAGTACATGATTACAG
GCAAGGAATTGTTCTCCTGGTCTTACAGAAAAATGAATTGTGGAGAGCAAAGTACATCTATGATTTCAGCTTTTCA
TCCTGACACTGGTGAGAAGATGATTTTGTATAGGAAGAATGTCAGCCAGGTTCCCATGAACATGACCATCACAGG
TTGTATGATGACGTTTTACAGGACTACGCCGGCTGTGCTGTTCTGGCAGTGGATTAACCAGTCCTTCAATGCCGT
CGTCAATTACACCAACAGAAGTGGAGACGCACCCCTCACTGTCAATGAGTTGGGAACAGCTTACGTTTTCTGCAAC
AACTGGTGCCGTAGCAACAGCTCTAGGACTCAATGCATTGACCAAGCATGTCTCACCAGTATAGGACGTTTTGT
TCCCTTTGCTGCCGTAGCTGCTGCTAATTGCATTAATATCCATTAATGAGGCAAAGGGAAGTCAAAGTTGGCAT
TCCCGTCACGGATGAGAATGGGAACCGCTTGGGGGAGTCGGCGAACGCTGCGAAACAAGCCATCACGCAAGTTGT
CGTGTCCAGGATTCTCATGGCAGCCCTGGCATGGCCATCCCTCCATTCAATTATGAACACTTTGGAAAAGAAAGC
CTTTTTGAAGAGGTTCCCATGGATGAGTGCACCCATTCAAGTTGGGTTAGTTGGCTTCTGTTTGGTGTGTGCTAC
ACCCCTGTGTTGTGCCCTGTTTCTCAGAAAAGTCCCATGTCTGTGACAAGCTTGGAGGCCGAGTTGCAAGCTAA
GATCCAAGAGAGCCATCCTGAATTGCGACGCGTGACTTCAATAAGGGATTG**TAA**AGCAGGGAGGAAACCTCTGC
AGCTCATTCTGCCACTGCAAAGCTGGTGTAGCCATGCTGGTGAGAAAAATCCTGTTCAACCTGGGTCTCCAGT
TACGGAAACCTTTTAAAGATCCACATTAGCCTTTTAGAATAAAGCTGCTACTTTAACAGAGCACCTGGCGTGGGC
CAAGTGCCGTGATACTCCCTTACACTGAATCATGTTATGATTTATAGAAATACCTTTCCTGTAGCTTTTATAGTCA
TTGTTTTTCAAAGACGATATACCAGCCCTCACCCAGGTTTTAAAAAGCACTGGTAGGCATAGAATAGGTGCTCA
GTATATGGTCAGTAAATGTTCTATTGATTATCAATCAGTGAAAAAAAAAAAAAAAAAAAAAGGAGATTATAA
AAGGGATGATGAACATGGAGCTGCATCTTTTTAAACGTTGTTTTTGTATGCTTCAGACTCTTAATGCTTTTATAT
AAAGCTATCAACTGTATGTTGATCACAGTTTATAAGAAAGAACAAATCAAGATTGGCAATCCTTGCCGATCTTTT
AGAAATACCTTTTCTGGAGAAAAAAATCCACATGAAGTGCAATAAGCTTATAAAGCTAAGTAGTTATTAATATT
TCTATTAACATGATACAAAGGATGATGATTGTAAGTGTTTACTGACTGGCAGCTTTTATTTTCAGTATTAGCACAG
CGTCTTGCCAGTGTGGAGGCCATGTATTATTTTCAGTTCAACTGGATGAAATGTTAAATAAACTCAGAATGAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1396

MSGELPPNINIKEPRWDQSTFIGRANHFFTVTDPRNILLTNEQLESARKIVHDYRQGIVPPGLTENELWRAKYIY
DSAFHPDTGEKMILIGRMSAQVPMNMTITGCMMTFYRTTPAVLFWQWINQSFNAVVNNTNRSGDAPLTVNELGTA
YVSATTGAVATALGLNALTKHVSPLIGRFVPFAAVAAANCINIPLMRQRELKVGIPVTDENG NRLGESANA AKQA
ITQVVSRILMAAPGMAIPPFIMNTLEKKAFLKRFPWMSAPIQVGLVGFCLVFATPLCCALFPQKSSMSVTSLEA
ELQAKIQESHPELRRVYFNKGL

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FIGURE 1397A

CCGGCCCCGGCCCCGGCCCCAGCCGCTCCTGCTGGGCGCCCCAACCGGGTCCGGCCCCGGGGGGCGGGGGCCGC
GGCCGCCGAGGATGGGGAAATCCAACAGCAAGTTGAAGCCGAAGTTGTGGAGGAGCTGACCAGGAAGACCTACT
TTACCGAGAAGGAGGTCCAGCAGTGGTACAAAGGCTTCATCAAGGACTGCCCCAGTGGGCAGCTGGATGCGGCAG
GCTTCCAGAAGATCTACAAGCAATTCTTCCGTTCCGAGACCCCCACCAAGTTTGCCACATTTGTTTTCAACGTCT
TTGATGAAAACAAGGACGGGCGAATTGAGTTCTCCGAGTTCATCCAGGCGCTGTCGGTGACCTCACGGGGAACCC
TGGATGAGAAGCTACGGTGGGCTTCAAGCTCTACGACTTGGACAATGATGGCTACATCACCAGGAATGAGATGC
TGGACATTGTGGATGCCATTTACCAGATGGTGGGGAATACCGTGGAGCTCCCAGAGGAGGAGAACACTCCTGAGA
AGAGGGTGGACCGGATCTTTGCCATGATGGATAAGAATGCCGACGGGAAGCTGACCCTGCAGGAGTTCCAGGAGG
GGTCCAAGGCAGACCCGTCCATTGTGTCAGGCGCTGTCCCTCTACGACGGGCTGGTATAGTCCCAGGCTGGAGCTG
GATGCCTGGGAACCACTCACCTCCTTCTGTGCCATGAGGCCACCTCAGCCCTGACACCAACCCCGTGCCTCCACC
CAGCCTTCTTCCGCATCCACACACAGCCGGCTGCCCTTGACCCGGGAGGCCCCGGCTCTCCTCTCCCCTGTCTTG
CACCCATCCCCCGCTGAAGCCACCGGCTCCAATTGCCAGCAACCTCTGCTTGTCCGAAAACGACAACACGAAA
TGGAAAAGGCTACAGCCCTCTGCATAAACCAAGGACTTGGCTGCCTCGCAGGCAGCCTCCGTTCTCCCGCTCTC
TTGCGCGTGTGCTTTTGTTTTTTATTTTGAACAGACGTTTTTAAAGAAAAAACAACACTACCTTCTGTCTCTAGA
AGACACAGACTGACAGATGGGGTGAAGGCCTGGGGACCTCAGAGAACTCTGCCTTGCCCTCGTCCCTCGTCCCTC
GGCAGCCGGAGAGGCTGTGGGTGGGCGAGGGTGTCTAGGGGTTCTGCCTAGTCAACGTTATTTGTGCTCCCATC
TTTTGGCAGCAAAACCACTGCGTGGCTAGGATGATTAAATTATGAGGATGATGATTTTTTTTTGTGATAACAGTAT
TGTGCTTTTTTGTGGGAAAGTGAGGTTTTTTTTTATATACATATATAATTGATATCTTTAATTTATTGGTTGTT
AACTGTTGCTGCTGCCTGGTGTGTCTCAGCTCCAGGGCTGCGGGCCACCGTTTACATGTGCACGCCCTGACC
CACCTGCCCCACGCCGACTTGGGAGGATGGTGGCCTGCAGCGGCCAAGAAGCCAAAAAATTTTTTTTTTTTTCAG
ATACTGTGCTTGATTTTTTGGAGAGGGGAGAGGTGGAATTCCTAAATGGCTAATGCACTGTTCCCTCCAGCCCGA
ATGCCTCCTGCCAAACCCCTTTTCCCTGCTGCCTCTGTCCCCGCATCCTTGTCTCCCTGGGTCCGTAACATTT
TTCCGAGGATGAACAGGGGACATCTTAGGTTTTCTCAACTCTTGCTTTGGTGTGTTGCCGCAGCATGGAACAG
GGCCCTAAGGCTGGGAGCTGGAAGAAGGGGCATTGGGTACCCAGGCAGAGTCAGGAGAGGTGGTCTTTGAAGTA
AGTTAGCAGAAATCAAGGGGACCCCGCCTCCTTGGGCTGGGGAGGGGATTTCAGATAGTTTATAACTCTCTCC
CGCTCTGCCTTCCCTCCTTCTATCTGCTTTTTTCCAGTAACTGCATGGTGTCTTCCCTGGCCTTCTCTTGGCT
CAAAGGCTGGGAGGGAGGGAAGGAGAGAAGAGTTCCAGGCAATCCCATCAATATAGTCCCTACACCTGGGGCTGC
GGCCACATGTCTTCACGGAGGCTTCCAGCGGTGCCTGCCACTGAGGCAGGTGCGGCCCCAGGACCATCACCAGG
AATGCGAGGCCACCTGGACCAGAGGTAGGAGCCCAAGGTCCGGCCCTTGCTCTTTGATTGTGGGCAGCCTCCTG
CCCTCTCTGGGTCTCAGTTGCCCCATCTGCAGAGCGAGGAGGCCCGGGCTGGTTGGTCTTGAAGGCCCTTTTCCA
TGCCGACATCATGTCACTCTAGGCCTGGGGTTAGTTTTCTGTGGCTGGTGATGCTGTGGTTAAGTTTGCTTGAC
CCCAGCAGCCCCGAGGGACTGTCTGAGTCACAGCACAGCCCCCTATTGCGTGGCTGCTGGTGTGTGGGGTCACTTCC
AGCAGATGAATGTGTATGTGGCACACCTTGTCCCTTCCCGCAGCATTTTCTGGTTCCCCCAGACCCCTTGAGCG
CTCTTTGGGACCCAGAAGGAGTCTTGCACAGGGAAGGCTTGAGGTGAGAAGCCGCTTCCAGACTGTGAGGGCC
AGGCCTGGGTCTAGAATTCTTGCTGCTGCTTTGCAGAGTCAACAGCCCCATCAGCCCATGTTTTAGAGGGGACACT
TTGGTCTCTGGTTCCCAACCTCAGCAAGCAGGCCTCCAGCCCCAGGAAGGCCCTGCGCGTAGTGACGTTGCCGTG
TGGGGCTGCGTGGCTGTTCCTTGGCTGGAGCATTAGCCAACCCAGCGTCCCCCTGAGGCGTTTATTGGCA
GCCCCCTAGGACTGCACGCTGGCCCCACGGTAACCCCCCTCCCCACCAACATCCTGCAGGGATGGGGTCACTG
GTTCCACCTTACAGGCCACTTTGAAGGGTGGATTCTTTGAGGCCCTGCCAGTCGGCTCCCTGCTCAGCTGCTG
GCCCCGGCGACCTGGGACTCAGCACCAACGGCTGAAGTTTCTCAGCTGGGCTCTGACCTGGGGTCTGGGGCAGGG
AACGAACATGGTGGCTTTGGGCTGAGAGGATGAGGGAGGTCTTTCCAGGTCAAATTACTTTTCTTTGGCCTCTG
CCTGAGGCTCGATTTGCCTCTCTGGTCCAATGGGACTGACACTGTTGTACAACCTGACCTGTGGCTGAGGGTGTG
TGGGCTTAAGCATGTGGACCCCTTCGGTGTGTCTGGCCTTCTCCATCGTCTGCCCTTTGGCCTTTTGGTTTGA
AGCCACAGGTGTGGCTTCTGGCCTTAGCAGATGGTATGCTTGCGGACCGCAGCCAGCATGCCGCTGGGGCCACA
GCCCAGCCAGCCAGAGCTGCCGGAAGGGCCGCCCTTCCCGGCCCTGGCGGGGTGCTGGACACTGGCCATTTTC
ACTAGAGTTTGCTGGCAGGGACCGATCTCTGCCCCCTCCTCTCCCCAGGCCTCTGGCTGCAGTGATGCCGAGA
ATCCTGAGCCAGGTGCCCTCTGAGCAGCCCGTGCCTCTCTCCACAGCGCGCTTGGCACCCAATGCGGCTCGCTT
CAGATGCTCTGATGCAGAGGGCACGCCATAGTCCCTCTGCAGAGCCTCGCACTGGGGCCAGGGCAGGCACACAG

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FIGURE 1397B

CCCAGGCGGCCAGTCGGCCACGGCCTGTCCTCTTCCTCGTAGCGTCTGCTCCTCACTTTGTGTTGATGGTGA
AGGAGAATGTTCCGATTTTCCATGATCTAAGCAGGCCACGTTTAAAATAACATCAAGGCAAGCGTACGTGTCACC
CTCTGTACTGACATCTCCTCCCCTGAAATGCTTTTCAGTTTGACAGCCCGTTTCCTAGACAAGTGCACCTGGGGT
TTCAGGAACCTTTGTGTTTTTTCGGAGGGGGTTGGTGGGGAGGTCGGGATGCCTGGGATCCCTTCCTGGAGAGGCA
GGCTGTCTCTGGAAAAAGCCTCCATTGCCCACCCGCCAGGCGGAAAGTCACCCTGTTCCCAGCGCGGTTTCAGCA
TTTAATTTTAAGGGAGCTAAGGAAGCGCGGCGCGCCCCCTGGTGGTGGTAAGCCGCCAACGCACCTGGGGGCTGC
AACCCACCGGACGGGTGGTCCGGAGGGAGGCTGGAGCGGGGAGGCGAGGAGGGGGCTGTGAGTCCTCAGAGGCC
CTGGGCCACCACATTTCTGGCAGCGTTTCCCAGACACCCCTCTGCTAGGCCATCCCTGGATAGCAAGTGAATTAA
CTTAAGGGCACTGTGATGGGAAGCCTTGCCCCCTCTTTTTTTTTTTTTTTAATATCTGCGGAATAAACCCAA
TGGTTAATTTTGAATGAATAAAAGGCTTTTGTGAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1398

MGKSNSKCLKPEVVEELTRKTYFTEKEVQQWYKGF IKDCPSGQLDAAGFQKIYKQFFPGDPTKFATFVFNVFDEN
KDGRIEFSEFIQALSVTSRGTLDKLRWAFKLYDLNDGYITRNEMLDIVDAIYQMGNTVELPEEENTPEKRVD
RIFAMMDKNADGKLTLLQEFQEGSKADPSIVQALSLYDGLV

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FIGURE 1399

GTCACCCCCAGCGGGCGCGGGCCGGAGCACGGGCACCCAGCATGGGGGTACTGCTCACACAGAGGACGCTGCTCA
GTCTGGTCCTTGCACTCCTGTTTCCAAGCATGGCGAGCATGGCGGCTATAGGCAGCTGCTCGAAAGAGTACCGCG
TGCTCCTTGGCCAGCTCCAGAAGCAGACAGATCTCATGCAGGACACCAGCAGACTCCTGGACCCCTATATACGTA
TCCAAGGCCTGGATGTTTCTAACTGAGAGAGCACTGCAGGGAGCGCCCCGGGGCCTTCCCCAGTGAGGAGACCC
TGAGGGGGCTGGGCAGGCGGGGCTTCTGTCAGACCCCTCAATGCCACACTGGGCTGCGTCTGTCACAGACTGGCCG
ACTTAGAGCAGCGCCTCCCCAAGGCCAGGATTTGGAGAGGTCTGGGCTGAACATCGAGGACTTGGAGAAGCTGC
AGATGGCGAGGCCGAACATCCTCGGGCTCAGGAACAACATCTACTGCATGGCCAGCTGCTGGACAACCTCAGACA
CGGCTGAGCCACGAAGGCTGGCCGGGGGGCTCTCAGCCGCCACCCCCACCCCTGCCTCGGATGCTTTTCAGC
GCAAGCTGGAGGGCTGCAGGTTCTGTCATGGCTACCATCGCTTCATGCACTCAGTGGGGCGGGTCTTCAGCAAGT
GGGGGGAGAGCCGAACCGGAGCCGGAGACACAGCCCCACCAGGCCCTGAGGAAGGGGGTGCAGGAGGACAGAC
CCTCCAGGAAAGGCAAGAGACTCATGACCAGGGGACAGCTGCCCGGGTAGCCTCGAGAGCACCCCTTGCCGGTGA
AGGATGCGGCAGGTGCTCTGTGGATGAGAGGAACCATCGCAGGATGACAGCTCCCGGGTCCCCAAACCTGTTCCC
CTCTGCTACTAGCCACTGAGAAGTGCACCTTAAGAGGTGGGAGCTGGGCAGACCCCTCTACCTCCTCCAGGCTGG
GAGACAGAGTCAGGCTGTTGCGCTCCACCTCAGCCCCAAGTTCCCCAGGCCAGTGGGGTGGCCGGGCGGGCCA
CGCGGGACCGACTTTCCATTGATTCAGGGGTCTGATGACACAGGCTGACTCATGGCCGGGCTGACTGCCCCCTG
CCTTGCTCCCCGAGGCCTGCCGGTCTTCCCTCTCATGACTTGAGGGCCGTTGCCCCCAGACTTCCTCCTTTCC
GTGTTTCTGAAGGGAGGTACAGCCTGAGCTGGCCTCCTATGCCTCATCATGTCCCAAACCAGACACCTGGATG
TCTGGGTGACCTCACTTTAGGCAGCTGTAACAGCGGCAGGGTGTCCAGGAGCCCTGATCCGGGGGTCCAGGGAA
TGGAGCTCAGGTCCCAGGCCAGCCCCGAAGTCGCCACGTGGCCTGGGGCAGGTCACTTTACCTCTGTGGACCTGT
TTTCTCTTTGTGAAGCTAGGGAGTTAGAGGCTGTACAAGGCCCCCACTGCCTGTGCGTTGCTTGATTCCCTGAC
GTAAGGTGGATATTAAAAATCTGTAAATCAGGACAGGTGGTGCAAATGGCGCTGGGAGGTGTACACGGAGGTCTC
TGTAAGCAGACCCACCTCCCAGCGCCGGGAAGCCCGTCTTGGGTCTCGCTGCTGGCTGCTCCCCCTGGTGGT
GGATCCTGGAATTTTCTACGCAGGAGCCATTGCTCTCCTAGAGGGGGTCTCAGAACTGCGAGGCCAGTTCCTT
GGAGGGACATGACTAATTTATCGATTTTATCAATTTTATCAGTTTTATTTATAAGCCTTATTTATGATGTA
TATTTAATGTTAATATTGTGCAAACCTTATATTTAAACTTGCCTGGTTTCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1400

MGVLLTQRTLLSLVLALLFPSMASMAAIGSCSKEYRVLLGQLQKQTDLMQDTSRLDPYIRIQGLDVPKLRHCR
ERPGAFPSEETLRGLGRRGFLQTLNATLGCVLHRLADLEQRLPKAQLERSGLNIEDLEKLQMARPNILGLRNNI
YCMAQLLDNSDTAEPTKAGRGASQPPTPTPASDAFQRKLEGCRFLHGYHRFMHSVGRVFSKWGESPNRSRRHSPH
QALRKGVRRTRPSRKGKRLMTRGQLPR

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FIGURE 1401

GCTGTGGACGAAGAGGCGGCCTCGGTGGTAAGTGGCGGCCGCTGGGACCCAGCCAGGTACCGGTCCGGCTCGGCC
CTGCCCCTTTCCGGCCGCTCTCACTCCTTCCCTCGGCCTCGAGTTCTCTGTTGGGCCCGTGGGGCCGCCGCGGGG
TCGGGGCTGCGAGGCAGCGCCCGCCGTTCCATGGTAAGCGGTGCTACGGGACGTTTCGGAAGGAAACCTCGCTAGA
GCAGGGGACGCCTGGGCTCCTGGCTTGACCACGGGGCCTTTGCACGGCCAGGGCTTTGCGACCGCAGTGTCTTCCT
TCTGTCCCCGGTCGTGCGCCGTGCCCCCTCAGCGCGGCTCACGTTTCGGAACACGTCTGCCTTTCATGCCTCCCGA
AGAGCCTCCCCGCATCCCGTGCCCCCTGCTCGCTGCTGCCGCTGACCCCTTGGGCGCTGCGCTGGTCCAGAGCGTG
TTGTCTCTGACGCCGTCAGAACCTGAGCTCCCTGCGAGCTGGGACTCCGCCGTGTCTTCATTGCCTCCAGTGCA
AAGCAACTGCTTGCAAGAGAACAAAAGTGTGTTTCAGGTGCACAGAGTAGAAAATTCAAGGAGCCTGAAAGGGTAT
TTGGTGAAGACTTGATGTGTTTTTCCCAGTCCTAACCTCCAAGGCCAGTTCTCCCCTGGGGCAGAGGGAAACCC
GTTTCTTACGGGCTGCAAAGAAAGTCTATGCAGGAACATCTACGTGCGTTTCTGCAAAGGTCAGTTACTTTAC
TTGGGGCTCTTATACTTAACGTAGCTCGGAGAGCGCCCCATGCATTCAGATACAGGTGGGATTCTCCGGAAACG
GAGTTTTATAGCACCAGACTTTATCCCTTTTCTGTAGAAATTTAGGGTTTTTGCTGTCTTTTATAACGAACAAT
GCTAGCTTGACTATTGCTTGTACAAACCGTTTTTTGCCCAAGTCGGACTATTTTCTTAGGTTAAATTCCTTGCTG
CAGAAGTGCAGGGGCTGTATTTAGGCCCTTAAAGGGGTGGTACCAAATCGCCCTCCCCACCAGCATAAGAGGGG
GCCGGCGACACCCTTGCCCAAGCTGGATTTTGACAGCCTGGTAGGCGTGAGATAGTATTTCACTGTAGCTTGTGT
TTCTGTAAAGTATAGTCGAACGTCGTGATGTTCTGTACATCTATGTTACGTTGATCATTGTTACCACTGACAG
TCGTTTCGAGATTGGAAAATATGTTTATTATAAACGTTTACTATTTAAAAGCCATTTGTATT

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FIGURE 1402

AVDEEAASVVSGGRWDPARYRSGSALPLSGRSHSFPRPRVPRGPGVAAAAGSGLRGSARRSMVSGATGRSEGNLAR
AGDAWAPG

1552/1629
FIGURE 1403

AACAACTTTCTTTTATTAAAAATGTACATAAGTAAAAGGAACGTGGTTTAATTGTGCAAAGAGTAAGAAATACAG
ATGAGCAAATAACACGTATTAAAGCCACCTACGATATACCACCCAGAAGTAACCAGGCTGTTGAATTTTATAGAGA
CTGGGGTGCAAACACATTTTTTCACTCCCTTGTCATATATCTGGGAGCTCTGCCATATACAGACACAGACGCGG
TGTCCACAGGCGATGCCTCTGCTGGGAATGCTGCAAGCAGGAGTCTATCCTTTTCTGGTACTGGCTCGGGGGCCC
TCCTCAGCGCCCAGGTCACCTCTAGCATCCAGGAGTCCAAAGGCCCGGCTGTGCAGGCTGCAGAGGTGATCTTGGT
GTGTTTTCTTCCAATAGGCTACAACTCTGGCACCCATGGCTGGTGGCTGGCATTCAACTCTCCAGCAGCCAGGG
AGTCCATTTTCTTGTTTCTCTGCTGGCCATCCTCAGGACTTGCGGCGGGGAGTGGGGGGCCCAGGGTGTGCTGCC
ACCTCGCCCGGCGCGGGTTGCGGCCCCAGGGCCCGCGCTCCAGGCTG

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FIGURE 1404

GC GCGGCCCA **ATG** GAGTCGGGGCTGCTGCGGCCGGCGCCGGTGAGCGAGGTCATCGTCTGCATTACA AACTACACC
GGCAAGCTCCGCGGTGCGCGCTACCAGCCGGGTGCCGGCCTGCGCGCCGACGCCGTGGTGTGCCTGGCGGTGTGC
GCCTTCATCGTGCTAGAGAATCTAGCCGTGTTGTTGGTGCTCGGACGCCACCCGCGCTTCCACGCTCCCATGTTT
CTGCTCCTGGGCAGCCTCACGTTGTCTGGATCTGCTGGCAGGCGCCGCTACGCCGCCAACATCCTACTGTCTGGGG
CCGCTCACGCTGAAACTGTCCCCCGCGCTCTGGTTCGCACGGGAGGGAGGCGTCTTCGTGGCACTCACTGCGTCC
GTGCTGAGCCTCCTGGCCATCGCGCTGGAGCGCAGCCTCACCATGGCGCGCAGGGGGCCCCGCGCCCGTCTCCAGT
CGGGGGCGCACGCTGGCGATGGCAGCCGCGGCCTGGGGCGTGTCTGCTCCTCGGGCTCCTGCCAGCGCTGGGC
TGGAATTGCCTGGGTGCGCTGGACGCTTGCTCCACTGTCTTGCCGCTCTACGCCAAGGCCTACGTGCTCTTCTGC
GTGCTCGCCTTCGTGGGCATCCTGGCCGCGATCTGTGCACTCTACGCGCGCATCTACTGCCAGGTACGCGCCAAC
GCGCGGCGCCTGCCGGCACGGCCCGGACTGCGGGGACCACCTCGACCCGGGCGCGTGCAGCCGCGCTCGCTG
GCCTTGCTGCGCACGCTCAGCGTGGTGCTCCTGGCCTTTGTGGCATGTTGGGGCCCCCTCTTCTGCTGCTGTTG
CTCGACGTGGCGTGCCCGGCGCGCACCTGTCTGTACTCTGCGAGGCCGATCCCTTCTGGGACTGGCCATGGCC
AACTCACTTCTGAACCCCATCATCTACACGCTCACCAACCGCGACCTGCGCCACGCGCTCCTGCGCCTGGTCTGC
TGCGGACGCCACTCCTGCGGCAGAGACCCGAGTGGCTCCCAGCAGTCGCGCAGCGCGGCTGAGGCTTCCGGGGGGC
CTGCGCCGCTGCTGCCCCCGGGCCTTGATGGGAGCTTCAGCGGCTCGGAGCGCTCATCGCCCCAGCGCGACGGG
CTGGACACCAGCGCTCCACAGGCAGCCCCGGTGACCCACAGCCGCCCGGACTCTGGTATCAGAACCGGCTGCA
GACT **TGA** CACCCTCGGCCCACGACTGTCTTCCCAAGTTTTACAGACTTGTTCTTTTTACATAAAGGAATTTGTAGG
AAATGCAGCCAAAGGTGCAGTCGGAAAAAGATGCAGGGGAAATGTATTTATGCAGCGACACCCCAATGTGAACA
AACAGACAAAAATCTGTGCCCTCGTGGAATTGACGTTCTGCTTGGGAACACAGAAAAGAACTCGGTGATGAAAT
AATGGAGATGATTCCAGTGACAAACGACAGAGATGGTGATGGTGGTCAGGGAAGACCTCTCTGCAGAGGTAGTGA
CTTGATGATGTAGCTGAGACCTCTGTCTGCTGGGAAGACCAAAAAGAAAAGCATTTT CAGGATGAGGGAATGGCATGCG
CAAAGGCCCTGAGGCTGAAATGTGCCCATGTGTTCTAAGAAATGCAGCGATGCTGGTGTGCCTGGAGCAGGGACG
GAGGGGGAGAATGGGAGGAGACAAGGAGCTGAAGGAGTAGTTCCCGAAGGACCTTG TGGGTGATATAGAGGACTT
CGCTTTTGCTCTGAGTGAGGTGGGAGCCATAGAAGCTTCTAAGCAGAAGAGGGACTTGCCCTAATTCAGGTGATC
ACAGGTGTCTTGTTGGCCTCCATGGGAGGTTGAAAACACAGAAGGTGAAGGGGGGCTGCACTGAGCCACAGGAAC
AATGATGGAGATTCCAGCTAAGCCCAGACCCCGTGGATTCTAGATAGATTTTAGAGGCAGCAGACAGAATTACTG
AGGAATTGAGTGTAAGAGTGGAATAAAAGTTATCAAGGACAATGCCAAGGGTGGGGCACCCCAAATTTGACTTTG
GGAGACTCAGCCAAATCCTATCTGGTAATAAAATTTCTTTTTATTTTTCTTTTCTTTCTTTCTTTCTTTCTTTCT
TTTTTTTTTTTTTGAGTTGGGATCTTGCTCTGTCAACCAGGCTGGAGTGCAATGGGCACAATTATAGCTCACT
GCAGCCTGGAACCTCTGGGATCAAGCCTGGAGTTCCTGCTTCAGCCTCCCTAGTAGCTGGGACTACAGGCATGCA
CCACCATGCCAGTTAATAAAATTTCTTCAAATGCAAAAAAAAAAAAAAAAAAAAAA.

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FIGURE 1405

MESGLLRPAPVSEVIVLHYNITGKLRGARYQPGAGLRADAVVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLL
GSLTSLDLAGAAYAANILLSGPLTLKLSPALWFAREGGVFALTASVLSLLAIALERSLTMARRGPAPVSSRGR
TLAMAAAAGVSLLLGLLPALGWNCLGRDACSTVLPLYAKAYVLCVLAFAVGILAAICALYARIYCQVRANARR
LPARPGTAGTTSTRARRKPRSLALLRTL SVLLAFVACWGPLFLLLLLDVACPARTCPVLLQADPFLGLAMANS
LNPIIYTLTNRDLRHALLRLVCCGRHSCGRDPSGSQQSASAAEASGGLRRCLPPGLDGSFSGSERSSPQRDGLDT
SGSTGSPGAPTAARTLVSEPAAD

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FIGURE 1406

ATGTATAGTATTGCTCACGTTAGCAGTTTTCTGTAAGGAGGGCAAGTGTGAGGATAATAGGTGGACTTTTTACTC
ACCTATTTTACCACAATCTCACCTGCAGGTGATGGTCAATGCTTGCTGCTCCATCTTTATTCATCGTTAATGTT
AATTTATGACAACTCAGGGGGAAAAACATTAACAAGCCTAGTTTGGTTACAGGTACACACAAGCTTGAATATTTCT
CTGCACTGAAATGAAAGTGGCATAGTTCATCACCACTGCTACATTTTGTAGAGCATCTTATCAGCCATAGAAAT
AGGACAATCTATAAACTTTGGGGAGGGTGGGGGAGGAAATGACAAAGTGTCTGTCAAAAACAGGCATAATCTAA
AACAAGGTGGATGTAGCAAATCTCTGTCACCTGCTTGAGAACTTTGAGCTTGTGGCAGTTTTGCAGACTTACATGA
CTTCAGCACTTTACGACATATTTTTTACTATGAATGTTCAATACAATTTAATATTTATAACTGATTTCTGAGGGA
TCTGCTCCATGTCTATTCTGTTATCTGCATGAAAACAAAATGTATGCCAATTTTCAAGTATGTCAATAATCAAGGTT
TTAAATGTTTGAAGAAAATACAAACAAGATTGCTGATCTGTTCTGTATTAGTGACATTCTGGTACTTCTAGATT
TGCAATAAATTTATGGATTTTTTATTTAAAGAGA

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FIGURE 1407

CIVLLTLAVFCKEGKCQDNRWTFYSPILPQSHPAGDGQCLLLHLYSSIMLIYDNSGGKT

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FIGURE 1408

GAAGTTTTACTATGTTTAATAATTTAGTGAAATTTGGGCTATGTGTTTAT**TG**ATTTCAGCTCAATCCAGAGGAAAA
TTTTAAAGGCTTACAGCCTTAGGATTATAGGATACTATATAATACTTTTGGTACAGAGATAGAATTAAATAACAT
AAAAATCAAAAATTTATTAGGCTAAAAATTTTGAGGGGAGAAGTGGTATGAAAATACAAATTCAGGAGTAAAAGGA
AAAGTGGGGCATTCCCTTGCTACTAAAAATTGCCCTGTTCAGGTAAGACTGATCATAAAAAAATGGCCCTGTTC
TAAAAATTTTTAAAAAGATCATAGTATCTATCAAATAACTTATATTAGAACCTCCTGGGCTAAATTTAAAAAGTA
ATACAACAGTTTTTATTTAAACATGTAGTGTCTACGGTATGCCAGCACTTTGCAGCTATTTATAATGAGAAATTTT
AGATGTCAATATAGCAATGTGCAAGAAGATAGAGATTTTCAAAATTCACCTTAAGAGTATCTGAGCATAAAATGTT
AAGATTGCTGATCGGATGTGAGGGCGATCTGGCTGCGACATCTGTCACCCCATTTGATCGCCAGGGTTGATTCGGC
TGATCTGGCTGGCTAGGTGGGTGTCCCTTCCTACCTCACCGCTCCATGTGCGTCCCTCCCGAAGCTGCGCGCTC
CGTCGAAGAGGACGACCAACCCCGATAGAGGAGGACCGGTCTTCGGTCAAGGGTATACGAGTAGCTGCGCTCCCC
TGCTGGAACCTCCAAACAAGCTTCCAAGATTGCTGATCTAGGGCCACTAAGTGATGAAGCAAAAAGGATGGCTAA
AAAGGACCTCAACCCTTTTGACTTTAAAAGGAAAAATAGCTTAACCTTCAACCTGTGTGACATTTAACTTTTTGAA
CCCAACCGTAAAAGCTATCTTCTAACCAACAAAAAGTTAATAATTACATTTGGAATTATACAGAATTAGAAAATT
GGCATTAAAAATACTCAATAATTTGTCCCTGGTTTTTAATTTTCAAATATTTTCTTTTTGAAGAGCCAGATTC
CAGTGATCCTGCCTCTCAGAAATTTCCACATTTCTTATTTTTCATTAGGCCTTAAGAAGCTGCATTTGTAAACTT
GTGTTTCATTATTAAAGCTTAATTTATTTTTATATAAATAGTATGTGCTTTGTGTACATAGAGAATTAAGTGAA
TGAGTCACACAGATGTTGGCTGTTGTTAATGTGAAAATTAAACAGCTGTATCACATTTTGAAAAATAAAAGTTTC
ATCTGAATGAATATAGCAAAA

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FIGURE 1409

SFTMFNNLVKFGLCVY

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FIGURE 1410A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCACCACCCAATCCTCGCTCCCTTCTGCTCCACCTTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCTT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCCTTTT
CCAGGCCGGGGAAAGCAGGAGGGAGAGGGGCCCGCGGGCTGGCCATGGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCCTGCAGAAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGAGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAAGTGGTGGTGGTGGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAAGTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTTCTTCTG
TTGTTTTTGTCTTTGTGTTTTAGGGTGAAACTTAAAAAAAATTTCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAAGCATTGGTGCCTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAAGTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAAGTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCTCTTGCTGTCTACAGTAGCTGTACCTAAAAAAGATGTTTTATTTTGGCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTCATTGCAGACACC
ACCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTTATTTAAAGGGTAATGTGGCCTTGGCATTCTTC
TTAGAAAAAACTAATTTTGGTGCTGATTGGCATGTCTGGTTACAGTTTAGCATTGTTATAAACCATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGGCCCCCTCCCTTCTGCCCCAGTCTGGGTTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTTCTTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTCCCATCACAACATTCTCTCA
GACAAGCCTGTAACTAAATCTGTTACCATTCTGATGGCACAGAAGGATCTTAATCCCATCTCTATACTTCTC
CTTTGGACATGGAAGAAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTGTTCC
CTTTTCCGTTTTTTTTTTTTTTTATTGTTGTTAATTTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTTC
TTCCTCTCCACTTCTTAGAGGCATTGAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTTGTTAAATATTTGCCTTTTTAAGTAAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAAACAATCTA
AGGGTCTCTCATTTTTTTTTAATTTTGTGTTTCAGTTTGGTTTTTTTTTTTTTTTTTGGCGCTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAGCCCTTCCGTAGTTTGTCTTCTGGTAGCATATTCATGGTTGTTTTTTTTTTTTTTTTTGGTTTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTCACGCTTTTGTTCATAATACCTCACACCCTACAGTTTCTGCTTGGGAGCCCA
TTCGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCCGAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATA
CATTGAACCAAGGATCCTCCCTCCCTTCAAAGGCAGACGTTCAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCA
TCTTGGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTTGAAGTTTTTCCCCTCCGTCTTT

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FIGURE 1410B

CCCCCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCTAAAAATTCAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCCTGGGCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTCATGGTGA CTGACC
CTTGAGCTTAAACAGAAGCAGCAAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACTTTCCACTCTTCCTGTAGTCCCGAGGCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTTGTTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCAC
GAGGAGCTCTCCCCCTTGGATTTGAACCTGCTCTTTTTGTGTGTGTGTCTTTCTCTTCTTTTCTTACCTCCC
ACTAAAGGGGTTCCAAATTATCCTGCTCTTTTTCTACCTTGTGTGTGTCTTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGCTGTTCTTCCAGGAGGCCTTATTTGAACTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCTCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCCTGACAGCATCACGCTGCATCCCATTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGCACCTTATGTCATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCCCTAAGCCAACAAACCCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTCAATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCTCATAACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTCTGTGTGTCTGCTTTTAACTTGGCTGGGCTATCAGACCCCTATTCTCGGC
TCAGGTTTTGAGAAGCCATCAGCAAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCTGCAGCC
TACTTTGGGGAAATAAAGTGCCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTT
TGAAAAACAAAGTTTCTATTTTTTATTTTTTAATTGTTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCCAGCA
AATCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCTTATATCATGTACCTCAGATCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTTCTTTTTTTTTTGTCTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCAGTGTAAAGTGAT
TTAAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 1411

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLETIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQQREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAAICGLQQDEEVSSLTC
DALTELLAKITNTDVDCLKACQEQIEAVLLNSLQQYRQDQRDGSKEDELDQASTPTDVRDIDL

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FIGURE 1412

AAAAAAGAAAAAATAAGTGAGCTGAACTCACCTGAAGTGGTTTACTTCTGTGGGTAAAGAAGTTCTAGTCA
GTGTTCATAGTCGTTTCGTTTTGATAATTGTTGAACCAATTTTGTTTTTAAACCTTTAGACTCTGAAAGTAATA
TTTTGACTAAGAATGTAAATATTTCCAAACTAAATTACTCGGGAAGTAAACGCTTTTTTTAAAGTATTTTTACT
GGTTTTATACCAATATTATATGCAGAAATCACAGGATGAATTTAGAATTAAATCTCAATTAGTTCACCTTTGGCCT
AGATTTATGAAAAATGCATGCCTCGTAAAGAGTCCACTGTATTCACGAGTAAAGTTGCTTTTAGTGTTCACTTGA
TGACTTGGAGAGTAGGAATTTGCAAAATCTGAATTTAAGGAAATTCCTTTAGGATAACCATTTCAAAAAATAAAA
TTGCTATGCAATCTTGAATATTTTCTCTTTTGCCTCGTAAATGAAAATGCATTCACAGTTTCTGTAAATTATTT
AGCAGCCTTAAAGTTTATCAAAAAATTGTCCAGATTCACGTCAGCATGCTTGGCCCTGCATTTAATTTAAGAA
GGATTAATAATAATGCTCTGAATTTTTCGAAAGGGATTCTCCTAAACCCACCCACTTCTCTTGCCAGGCTGCTT
TTTAAAAATATTTTTTTATTTTTTACTTATTTTTAAATTTTCTCTTTTTATTTATTTTTGGTTTTCTTGTTAGCC
CCCTGTTATATGGGAGAACGAAAATTGTTATATTTTGAAAGTACTTATTACATTATTTTTATTTTAGTATCTTGA
TGCTCCTGTCAAAGGGAAATGAGGCTTTTAAAAATAAAGTACCTTAATTCCTTTATTGACTTTTTTGCCCTAAATT
GCTAGGTGTGACCCAGCAATCTTTTAGGAAGAGATTTTACAGTGGTGCTTTATTTATATCAATAATCCAGTATAG
TTAGGCTGTTCAATTCCTCATAATAGAGTACATAACAGAAAAGTGGGACTTTCACATTTTCATATTTAGGCACGTT
CCAATTTAATTCAAAAATACTCTGTAATCTACATCTAAAAAACCGATTCCCTAATTCGAATTTATTGGTACC
AAAGCTCTCTTTGGCTATAGACAATTAAGAGTTGACCTTTTAAAGTTAATGTATATGCTTAAAAACAGTTTLAGGA
AAATATTTGGTAGACAAAGAGTTTCAACTTTAAATGTTCACTATGTCATTTAGTGTCCAACCTTTACGGATAGGTT
GACTATCTAAATAGGCATTTTTTAGTCATTAAAAAAATCTAGTCACCAGGAGGATCCCTATAACTCAAAATAACT
TGTTTGTAAGAAAATTTGTTTACTTACCCATTAGTAAGTTCCTGCATATTCATTATAAGATGGCAAATCAAAC
TTTTCTAGGATGAAGACAGCTTATTTTTAAGTTGTATAGTCTTAGTTGGTTTAGGGTCTCAATTTTAATTAATAA
AATACTTGGTTTTTATTTGCTTGTCCPTTTGAATTCCTGTTTTAATAATTTTAAATGAGCACAAAGAATGTTGA
AGTTTCAATTAATCTCTCTGAATGATGTTTTTTTCTCTGTGATGAGTTGTTTCTGACTTTTTTCCTTTTGTAT
TTGTAATGTTGATTAAAGATGTAAATAAAAAAGTGTGCCTGATTATTTTTGC

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FIGURE 1413

KKEKKISELNSPEVVYFCGLRSSSQCS

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FIGURE 1414

GCGAAC TGGAGCGGGAGGCGGGCGGCCGGAGGGCCCAGGACAGCCCCGGGAGGGCGGGCGAGGCGGAGCAGGAGCGC
CCCGGCTCCGGCCACATTCTCAGAGTCAGGAAAAGGGGCGAGAGGCCACATGTCTCCCTCTCGCCCAACTGAAAA
CGAAACGGCGCTCCAGCAGATTGGGTGGAAAGAGCTGGGTCTCTTTTCTCTGTTTTTACGCTAGAAAGGGCTTG
TAAACATTGTTCTTTTTAAAATGACCTACCCAGGCATTTGTTTGGGCACACTTCTGTCTCTGGGGTCATCGTTCC
TAGGTGGCTTCGGACCTGGGACTTTTCTGTATCTGCACATTGTCGTTTTATACACAATTGCCAAGGTGGGACTG
CTTTCAACTTTACTGTGCTTGAAGCTGCAGAGGTTCTGCCCTGATGTTTCTGGAATAATGCTGAGGACTGCCTT
TCGGGTAGCCGCCCTATTCACTTCACTTCATCTCGGAAATACCTGACCCCTGCCTTGGATCCAGCGGCCCTCCTG
AGAGCTGAGGAAGGAGGAAATCCTATGTGTCTGCTCCCGGAGCTGCCACAACCCATCTTCCACAACCTCGGAAC
TGAAAAAAGGAACCCAGGACACGACTTTGCTTTTCTTTTGGACCTAGTTGGTGATTATACTCTGTCTCCCATGGA
GACCACGTCTTGCATCCTTCTTCTATATGGGATTTAGGATAGAAATTAAAAAGAAAACATATTATTTTGAGTCT
TGATTTGGAGAAAGGTAGTATTCAAGGAGGAAGTAGGCTATGATACACATAGAAAATTTGAGGACAGTGTTACTTA
ACAAGGACATTTCTGTCTCTGCAGAAGTCACAGCTTGGAGGAAACCACTTGCCTATTGATGAGGAATTTGGC
CACCAAACCACTGATACTTTCCCAAAGGTTTGGCAGAAATTGTTTTTTGAGTGGCTCACCAGAGTACCCAGAAGA
ATCAGTATGGAATTAGAGGACAGTGGCCTACCCTAAATAAAGACATGAGTGATGTATAAAGTCTAGTGTCAATTT
ATTCAAGAAAATATCAAAATTATTCTGGGAGCTATGGGTCAAAGTTGATAGGCACAAACAAACAAAAACGAAAGGT
ATTTTAAATTCACAGCTTGATAAGTAAAAGGGAGATGTTGTCAATTTCTCTTCTTCAATCCAACCTTTAGATTTTC
AAGCCGGAAAAAGGGTAATTAGAAGTTAGAAATTGTTATTGCCAGAAAATAGCTCTAAACCCTG

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FIGURE 1415

RTGAGGGGRRRAQDSPGRAARRSR SAPAPATFSESGKGARGHMSPSRPTENETALQQIGWKELGLFSLFFTLEAC
KHCSF

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FIGURE 1416

TCACATTCTATCTGTTTATACGAAGGTTGTAGACACACAGCGTATGTACATATGCCTAGTTGCTCTCATTCCCTTT
GTTTCACATCTCAAGCCTAACCCAGACTGAAAAGGTTTTGAAGGCTGAGATTATTCATCACCCCATCATTATAGA
AAGCAGGGCTGGCCCAAGGTTCTCACAGTGGGAGCAAGGTGGATTTTAACTCTGATCAGTGTTGTAGCTCAAATA
TAAAAAGAACTGCAGCACAAAAGTCACAAGGATAAATGATCCCCCTCGTTCTTCTCCCATAAAAATAAGCAGCCAA
TTGAAGGTGGAAGTCAGTACAGTGCGGCATTCCCAGAGGCGACAGAACCTAAGATTCCATTTCTAAAGACACTGC
TCAACAAGAAGACCACCTGGGATGTCTTACATAAAACCATTTGGCCTGGCAGCTTTTGGCTGAGTTCTCTATTCTG
GTTCAAGCCAGCATCACAGCCTATCTGTGGTTTTAACAACCTGATGGAATTTGTATTTTGAGAACCCTCATCCGTT
AGCATGAAGCAAACCTCAAAGCATTGTTGCTCATCAGTTGTCATCTGTTTGAGAAAGATTTTGATTTGTTTACTTG
TAGTGAAGCTTGACCATACTTCTCCAGGGGCTTTTTAAAAAGATGAATGTGTGAGCTTGTAGATTTGTCCCCATG
AATGAAACCACAAGCAAATTCTCTTCTCTCTCCAGCCTCCCTTCCTCCCTCTTGTTTCTTCAGTGGCCATCTGT
GCATTATGTTCCCATTTGCCAGGCCCTCTTCAAGCAGCTTATCTATGAGTGAATTCAGAACTTCAAATTATAAAG
GACACCCAGATAATTGGCCTGTTCTCCAAAGTATCTGTCCCCTGTGCTGCTGCCAGATTTCTTCTTAATGAATA
CATCCAGTGACAGTGGGATTCTTGAGCTTGTCCGTATCTGTGAGAAAATGAGCTCTCCTGCTTTGTAACAGCTTG
TGGCTCAGGGAAAAAATGACAGCCATTGCACAAGTTTCCTTTGAATGTAGTTTTCTTTCCCATAAATGATACTT
TGAGAATACAGTTAAGGGGTTATTAGTTTTCTATTTTCATGCTTGGCCTGTGTGTGAGAATAACACAAGCTGTCAC
TGCAAATCAGTAGCTAAAAATGCTTTGTCTGGTTAATGTGAACATTTAATATTTGGCTCAATTAATAAATTAACCG
ATGAAAGTACATGTCATTGGAATTTGAAAATACCTTTTGTACGGAATACTTAAAGGGCATCACCCATGACTAAAC
CAGTGCTTTTAAAAATATGGAGAATATGGGGAAATTTAATATGAGTTGGGATACTTGACTCTTTTTTTTAAACCTC
TCTACCTGTTTGGCACAAACAGGGTATTGATAAAGAGTGGGCTCATTGTTATGGCAAAGGATTCATTGCATCTCT
GTGTTTTTAAAGTGGGTAAATTGTTTTTTTGCACCTCAGTCACATGATTAAAGCAGACAGAACAAGAGATCAGTTATT
CATTATACCATACTTTTAAAAAATATTGAGCCAGGCCCTGGGGAAAGTGGGAAGTGAGAGCCAGAGCGGCGTGG
CTGATAGTCTAGGGCAGTGCTATCCA

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FIGURE 1417

HILSVYTKVVDTQRMVYICLVALIPLFHISSLTQTEKVLKAEIIHHPIIIESRAGPRFSQWEQGGF

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FIGURE 1418

CTTCTAATCATTCTCTAGAAATGCAAATTCCAAATTCAAATTGATAGTTTTTCATTACAGTTCTCTGTCTTTCCCATC
TATCTTAAGACAGGAGCTTTCCCTCCCTCCCTGCACCTGGCCCCCTTCTCAACAAAGATATTTCTACAATTATTA
CCACTTCAGCCACTGCTTCTAAAACAAAGAAGGAAAAAGAAAGTCATTTCATGAAGATGTAACTTTGTGTCAGGGTA
AGAACATTTTTTACTCATGGCCAGGTGATAAGATATCAAGAGTTAGGGGTGAGGACAGATACCAAGGGTGAGAA
TTTTCACTAAAACCTAGTAGGATTCTTGCTTAAACTGGATTCTATAAGACAGAAAAGGAAGCCCAAGGTCAGGGTC
TAGTGGAAGAGAAGGCTCCGGGGAGCCCGACCTGAGTTTGATCTAGGAGAGTCCTTTGTCAATATCCTGTAGAATA
TGACCTTCACCTCATTTTCTTTTCTCAAGTGTATCTGGACTGTATTTGGCCTTTTGGGCTTCCAGGTGACTTTT
AGAGTAAGTTTATCAAGATCTACAAAATAGCTACTGAGATTTTGATTTGAATAGTATTTCTTCCTGATAATTC
TGAGTAAAATTCATTTTAAGGAAGTAGGAGGGGCAGTGGCCTGATGAAAAGCAAAAATGAAGAAAAGAATAAGGA
AAGACACAGTTTTGCCATCACCAGCCAGTGTTTAGTGATCTTAAATAGCTGCTTTTGTTTTTGAGCATCATTTG
TTGGGTATGGAGTTGCAGAAGTTGGGTTGAGGGACACTGGCTTCTAGAATCAAATATTGGCCTCCATAGAGTGTT
TCTGTACAGTGAGTTGGGAGGATGGGCAGGGGCCACTGAGGACTGTGGCGTGTCCCCACGTTAGAGTGATCTCA
CACAGAGCCTGTCCTGAAAATATAGTTATTTTTTAAAAAGTGTTTCCCCCTCCTTTTCATTGGCCATTTTCTCTTT
TACTACTCTTTACCTAGCAAAGGGTGGGCATGAGAAACCTGGTCAGTGGAAGAGAAAGCCATTTTGCAACAGTGG
TTATAGGGGTGGGAGAGTAAAATTTCTGGTTCTTGGGGAAGCTAAGCCCATTGGTAGGACCAGACTTTTGTATG
TGTGTTTCTTCCTTTAGTCATCTACTAAGGTAAATAAATACCTT

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FIGURE 1419

MCVSSFSHLLRLIN

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FIGURE 1420

GTGTTTGTAGTTCTGTCCAGCTCACATTTTATCTTCATACTTTGAGTAGCCTCCTTCCATGAATGGATCATCCAG
TGGCCGCACTTAGGTTCTCCTATGAAGATTTTGTGTATTGTACCTCAGAACCATCTCCATATTCTCTANNNNN
NNNNNNNNNNNNNNNNNNNNATTGAATAGAAGTATTTACTAGATGAGGAGGAAAACCCTAAAACAAAACATGAACAT
AAAATATTTTAAAAGGAAGACATACAAACAGACACTATAACCAAATAAGATGACAGAATTAAGGCCTTATGCCA
CAGCCAGAGTTGAAAAATGCAGAAAAAAGTTTAAAAACAAGGAATTAAAGCCAAACCTAACTTTTATCAAAATA
AATGTAAAAGTGATGAAAGAATCTGTTAAGATATCAGATTGTAATATAAAAGATACTAGAAACAAATGCCAATAG
AACACTTAAGTACATTTTATATATTCATCCATTAGAATATATAGCTGTCAGAAATGATAGAGAATTACATATGTG
TGCAAAAGTTTTTGTATCCATGTGGAAAAACACAGGAAGCTAATAGTACTGTTTTTCTCTGGAGTGGGTGTAAGGG
TAGAGACTTAACTCTTTACATCCTTATGGCAGCCTTCGAATACCTTTTAACTCCCAGTTCCCTTAACTGGGGGTG
TGTATCCTAGAATCCTCGACCCATTAGAAAAGTATATTGTAGACATCATACTCTTTACCCTTTAACTACACATG
CACTTCATAAGAACAAGCATGCTGTCTTACCCAAGTACAGCTATCAAGTTCAGAAATTTAACATTGCCATAATAC
TTTACAGTCCATATTTCAATTTTCAATTTGCTGTTTTATTGGTAATTTTTTTTCAGCTCCACGATCCAGCCTAGGATC
ATATGTTGTATTGCCATAACCCTCTAATCTGGAGCAGTTCCTCAGCTTTTCTTTGTTTTTTATAATAGTAATATA
TTTGAAAAATACAGGACAGCTAAAGGATAGAGTATCCTTCTATTTGGGTTTTTCTGATGTTTCCTCATGGTTAGA
TTGGGGTAGTGCAGTGAGGGTTGAAATGCTGTAAGTGATATGTATTGCAGGTATACATCCAGATGCACAGAATGT
CCATTTGTCCCTTATTGGTGATGCTAATTTTGATCACTTGGGTAAGATGTCCAGTTTCTCCAGTGTATCGTTATT
GTTTTTCCTTTTGCAATTAGTGGGTAATTTGTGAGGAGAACTTTGAGACCTTGTTGACAATTCTGTTCCCTCATC
AAATCTACCCCTCCTAGGTTTAGCATCCTTTGACGATTCTTGTCTGAATAAATTTTTACTAGGATGTTTCCAAAA
TTGTGATTGTTCTAACTCCATTATTATTTCTGTATTAATTAGTCATCATTCTACTGTAAGGAAGAGGTTTCCCTT
TATCATCAACTTCGAGTAAGTACTTTTTTCTGAGCCATTTGAATATTCCTTACTAGATGTGGTGCCTCTTTACCC
CAATTACTTAAGTTTGTATTTCCAAAGAACAAGGGTGTTTTCTGCATAGCCATAGCACAATTACCAAAATCAGA
AAATTAA

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FIGURE 1421

MIEELHMC AKVFVSMWKTQEANSTVFLWSGCKGRDLTYILMAAFEYLLTPSSLNWGCVS

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FIGURE 1422

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTCACAGCCCGTTCCCTCCC
GGAGCCCGGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCCTCACTGCGTT
TTTTTTTCTTTTATCCAAAGAACGGGGCAGTTAGTACGCTTGCCCTTCTGTCGCCCCGTTGGGAGCGGGGTTGG
TGTGCGGAGTGGTTCGCCTTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTTTTCTTTCTTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGCCCGGTCCCTGACTAACGGCTTTCTGCCCCCTTCTCTCGCCACCCCTGC
CCAAGGTCGCCCCCTCTGCCTTCGCCCCCTGTCCCGGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCACTCGCGTC
TCCGACGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTTCCGTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAGGATGTCTGACACTTTATACTG
GAAGGGGTGGTGAACCTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGCAATGCGAGATTCCATACACT
ACTACCTGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTTCACTGAACCCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCATGAATAGTAATATGGGTACAGGTACATTTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTCACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACCTACAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCCTCGGAGAGCCTTTAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACCTTTTATTTATTGTTA
ACTGTGAAAAGTACGTCCTTTATTGGGTTTCTTTTATATTCTTGGTTTGTAAAGAAGATGGTTTGTTTTTATA
GCAAAACTGTTAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTTCATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTC
TTGTATTTCAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTTTGTGGCTCTCGGAATGATTGACTTTCGTTTCACTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTTGTGTATTACCAAAAAAACAGATTCCCTTATCAGAATTTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTTAAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAAATTTAAACTGGGGCCTTGAATATTTATTTTTTGAACCTACCATGTTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAAAATTGAATTCATATAGTAACATGCAGTCTGAAGTCCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTCAGAAATATAAAAGTGGA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCTTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTTAACAACCTACGTAATTTTTGCCCTTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACTACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTGAAAACCTCATAGCATTTGAAT
ACAAAAAGTTGTGCCAGATTGTTTGCCCTAATTCAGTGTGTTTAAACAATATTTTCACTACACACTATGTATTAGG
CACTGTGTGGAAGTGTTAAGGGGTAGACAAGATACCGAATAATCTCCACAAGTTTATTGTGGTCTATAGTACT
TTTGTAAGTGGGGTTACAAAAATTATAGAAATTTTTTCTTTGTTTCATATGCATATTCATGATTATAATTTGGC
TTTGTGTGTGATTAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAAGAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTAGAATTTTTTAAAAACCTACAAATTAGTATATGATTGTTTTA
TATAAGTAAGATAGGAGCAACACTTTAAATTATTTGTGGGAGAATACAGCATTAAGGTGATTTTAAAGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1423

MNRVNDPLIFIRDIKPLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSSLGV

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FIGURE 1424

GGTAGCGACTGGGGCTCCGTATTCTGTTCACTGGAGTGGGTTTTATATATACCCAATAAATAGAAGTGTGACTGG
CCTGTCCAATCTCGAAGTCAGAAAAGGGCCATGGGTAGCATCACATCCTTTAGAGACTGGATGCAGTCACCAGACT
TTGAGGAAAGAGGGAAATTCATCCCAACCTGTCATGCTAGCTAAGAGAGCAAAAAGTCAAGAATATGAACAATGT
GACCTAGGCTCTGAAAGCTGACCAAGACACCATCTAAATAAACCTGGACTGACAATGAAAGGACTTTTCGTTCTCC
CTTAAATAATGTTCAAAATAGCAAGGAAATAGAGCTTCAGATGTGTCTTGTGTACCTGGTCTTTCATGTGACA
GTCAAAGATCCACAATGTGAAAGTGGGATTAACCCATCTGTGAAGTTCTAGTCTGTGCAGTCACAATTGACCACT
GCAGGTTTTAACAAGAGGACCCTGTGGGGACACAACAGACTTCAATTCTTTAGCCAGCTTTTCCTTGGCTCAGAA
TATGGAGAGAGCTGGAGGCCCTCAAACCAGAGGATGTTGCTGGTCTTCCCAGGAGAGAAATGAACATATCTTTT
GTAAAAGTAAGTTTCAAA

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FIGURE 1425

VATGAPYSVHWSGFYIYPINRSVTGLSNLEVRKGPWVASHP

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FIGURE 1426

GACTCTTACCTACTTCGGGGCCCACTTTGCTGTTCATCCGCCGAGCGTCCCTGGAGAAGAACCCGTACCAGGCTGT
GCACCAATGGGCCTTCTCTGCGGGGTTGAGCCTGGTGGGCTCCTGACTCTGGGAGCCGTGCTGAGCGCTGCAGC
CACCGTGAGGGAGGCCAGGGCCTCATGGCAGGGGGCTTCCTGTGCTTCTCCCTGGCGTTCTGTGCACAGGTGCA
GGTGGTGTCTTGAGACTCCACAGCCCCACCCAGGTGGAGGACGCCATGCTGGACACCTACGACCTGGTATATGA
GCAGGCGATGAAAGGTACGTCCACGTCCGGCGGCAGGAGCTGGCGGCCATCCAGGACGTGTTTCTGTGCTGTGG
GAAGAAGTCTCCTTTCAGCCGTCTGGGGAGCACAGAGGCTGACCTGTGTTCAGGGAGAGGAGGCGGCGAGAGAGGA
CTGCCTTCAGGGCATCCGGAGCTTCCTGAGGACACACCAGCAGGTCGCCTCCAGCCTGACCAGCATCGGCCTGGC
CCTCACGGTGTCGCCTTGCTCTTCAGCTCCTTCCTGTGGTTTGCCATCCGCTGTGGCTGCAGCTTGGACCGCAA
GGGCAAATACACCCTGACCCACGCTCTCCAGGGCAGAAGTCGCGGTGGGCTCAGTGGGTGCCCTGAGCGGGGTC
TCTCAGACTGACGTGAGGCCTTGGTGGGCTGCACTCTCACCTGGAGGCTCCGGGGAAGCATCTGCCTCCAGGACC
ATTCAGGCTGTTGACAAGTCAACTCCTCATGGCTGTAGGACTGAGGTTCCCAAGTCCTTGTCCCTGGTCCTGTGG
TCCCTCCACCTTCAAACCAGCAATGGTGCATTGAGCAAATTGTGGTCAAATATACATCATCAAATTTACCATC
TT

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FIGURE 1427

AGCAGTGGCCCAAAGAGGAGCAGCAGACAAGAGTGCAGTGGTGGCTGCCGCCGCACCAGCCTCAGTGGCAGATGA
CACACCACCCCCCGAGCGTCGGAACAAGAGCGGTATCATCAGTGAGCCCCCTCAACAAGAGCCTGCGCCGCTCCCG
CCCGCTCTCCCACTACTCTTCTTTTGGCAGCAGTGGTGGTAGTGGCGGTGGCAGCATGATGGGCGGAGAGTCTGC
TTGACAAGGCCACTGCGGCTGCAGCCTGGCCTTCCCTGTTGGCCAATGGGATGACCTGGCGGGCGGCCATGCGGT
GGACAAAAGCAACCCTACCTCAAAGCACAAAAGTGGTGCTGTGGCCAGCCTGCTGAGCAAGGCAGAGCGGGCCAC
GGAGCTGGCAGCCGAGGGACAGCTGACGCTGCAGCAGTTTGCGCAGTCCACAGAGATGCTGAAGCGCGTGGTGCA
GGAGCATCTCCCGCTGATGAGCGAGGCGGGTGTGTCCTGCCTGACATGGAGGCTGTGGCAGGTGCCGAAGCCCT
CAATGGCCAGTCCGACTTCCCCTACCTGGGCGCTTTCCCCATCAACCCAGGCCTCTTCATTATGACCCCGGCAGG
TGTGTTCTGGCCGAGAGCGCGCTGCACATGGCGGGCCTGGCTGAGTACCCCATGCAGGGAGAGCTGCCTCTGCC
ATCAGCTCCGGCAAGAAGAAGCGGAAACGCTGCGGCATTGTGCGCGCCCTGCCGGCGGCGCATCAACTGCGAGCA
GTGCAGCAGTTGTAGGAATCGAAAGACTGGCCATCAGATTTGCAAATTCAGAAAATGTGAGGAACTCAAAAAGAA
GCCTTCCGCTGCTCTGGAGAAGGTGATGCTTCCGACGGGAGCCGCCTTCCGGTGGTTTCAGTGACGGCGGGCGGAA
CCCAAAGCTGCCCTCTCCGTGCAATGTCACTGCTCGTGTGGTCTCCAGCAAGGGATTCCGGCGAAGACAAACGGA
TGCACCCGTCTTTAGAACCACAAAATATTCTCTCACAGATTTTCATTCCTGTTTTTATATATATATTTTTTGTGTC
GTTTAAACATCTCCACGTCCCTAGCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1428

MAVDKSNPTSKHKSGAVASLLSKAERATELAATEGQLTLQQFAQSTEMLKRVVQEHPLMSEAGAGLPDMEAVAGA
EALNGQSDFPYLGAFPINPGLFIMTPAGVFLAESALHMAGLAEYPMQGELPLPSAPARRSGNAAALCAPCRRRIN
CEQCSSCRNRKTGHQICKFRKCEELKKKPSAALEKVMLPTGAARWFQ

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FIGURE 1429

GAGGCTACTAAGGTATTTGGCTATTATAAATAAAATAGTGATGAACACGTGTACAGGTGTTTGTACGGACATAAG
TTGTCATTTCTCTTGAGTAAATACCTAAAAGTGGGCTTGCTGGAGTTTACTACCCTTGATGCTGCTGTTGACA
TGGAAAAGATTGAGGAACAATTTGCTAATCTGCACATTGTTAAATGTTCCCTAGGAACCAAAGAGCCCACTTACC
TTCTTGGTATAGACACATCAAAGACTGTCCAAGCAGGAAAGGAAAACTTGGTTGCTGTTTTATGTTCTAATGGAT
CAATCAGAATATATGATAAAGAAAGGTTAAATGTACTACGAGAATTTAGTGGATATCCTGGACTTCTTAATGGAG
TCAGATTTGCAAATTCCTGTGACAGTGTATATTACAGCATGTACTGATGGCACTGTGAAATGCTGGGATGCTCGAG
TAGCCAGAGAAAAACCTGTTTCAGCTCTTCAAGGGTTACCCTTCCAATATTTTTATCAGTTTTGATATTAATTGTA
ATGATCATATTATTTGTGCTGGTACAGAAAAAGTTGATGATGATGCATTGTTGGTGTTTTGGGATGCAAGGATGA
ATTCTCAGAATTTATCTACAACCTAAAGACTCACTTGGTGATATTAGAGACACATAGTGATGATGTCACTCAAG
TACGTTTCCATCCAGCAATCCCAACATGGTAGTCTCAGGTTTCATCTGATGGCCTGGTAAATGATTTGATATTA
ATATTGATAATGAGGAGGATGCACTGGTTACAACCTGTAACCTCAATTTTCATCAGTAAGCTGTATTGGTTGGTCTG
GGAAAGGTTATAAACAGATTTACTGCATGACACATGATGAAGGATTTTATTGGTGGGATCTTAATCATCTGGACA
CTGATGAACCAGTTACACGTTTGAACATCCAGGATGTGAGAGAAGTAGTTAACATGAAAGAAGATGCTTTGGACT
ATTTGATTGGTGGCTATATCATGAAAAGACAGACACATTGCATGTTATTGGAGGAACAAACAAAGGAAGGATTC
ATTTGATGAAGTGCAGCATGTGAGGACTGACCCATGTGACTAGCCTTCAGGGAGGGCATGCTGCTACAGTCCGTT
CTTTCTGTTGGAATGTGCAAGATGATTCTTTGTTGACTGGAGGAGAAGATGCACAGTTGTTACTTTGGAAACCTG
GAGCTATAGAGAAGACCTTTACAAAGAAAGAGAGTATGAAAATAGCATCCTCTGTGCACCAACGAGTACGAGTTC
ATAGTAATGATTCTTTATAAAAGAAGGAAAAAGCAGTGAATAATGCATTTGGCACTTTGTTTGGTAGGTTTTATAGT
TTCAAATAGTCCTTCTTGTTTACTACCCATGGTAGACATGTTTAAAGCTTTATGTAACCAAGCCAGTTAGCAA
ACAGTCCCTGAAAAATATGGTGAGAATGGTTTAAATCCGGTCTTCACATATTCTAAAAAATTTTAAAGCCTCTAA
GTATAAAATCAGTGAGTTGAAAGTAAATTTCTTATTTAAAGAACCCATCTGTTAATGTAGTAAATGTTGGCTTT
AAAGAAATAGCTCCGATAAGGACTTTTTAGAAAGGAAATACTTGGTAAACCTTAATAAAACAGGTGGTTGGCTGCA
TTTTTTAAGCCAGTTTTTTTACATTTTAAATTGTCTTTATTGTGTATAAAACCAGATTAGACTATATTCTTCATC
TGAGGAGCATCTATATGTTTAAATACACCTAATGTATTATGCTGGAGTATTTAAATGTAAGTATTTTAAATGAGTAA
ATAGAATTAACCTTTTTTACAAATGAAATGATAGGCATCTATGTAAAGTGAGAAAAATATGTTTCGTAAATATTT
GCATCTTTAATATTGTTAGTAAGTAGTAAACAGGTGTTTTGCTGATTGAAAGGAAGTTATCTTGGTAAATTGAGA
CTCAAAGTGAAATACAAAAATGAAAATATTTATAATAGGACTCGACTTGGAGAAATTGCTATTCTTCCTGTTGTC
CAAACCATAAATCTGAGGATAACCTGGGCTTTTCTCTTCTCCTAACCAGTTTTTCACCAAGTCCTGTG
CCATTTACCTCCTAACGTCTGTGACGTATCCTTTTGCCTTTACCTCACCCTATTACCCTAGAGAAGACTTTCA
TTATTTCTCATCTGGATTACCAGCTCGATCTCTAATCTGCTTCAGTTTCATCCTTCTTGCTACTTCTAGGCTAAAC
ATCAAAAACAGATCTGGTAGGGGCGGGGAAATGAGGGGGAAGAAACAAAACGATGGTGCCTCATGCTGCTTA
AAATCTTCAGTACATTGATGTTTTGATGGCGGACTACATAAGCGTTAAAAATTGTGTTTTTTCAGAACTTTTAAAA
TATAAGACAGTGCTATCTAGTGAATAAAAAAATTAGTTTGAAGATATCTGGAGAAATCGCATTCATAAAACAAT
TGGAAGTGAAACTATTAAAAACAATAGGGCTTTTTTAAATTAAAAATATTTAAATTCAAAAGTAATTAATAGTGT
TGGAAGATGTAGGTGAGAAAAATATTCCTGAAAGTAGAAGTGAAGAGACAAAGAGAAAAAGATGAAAGCCACAGAA
GATAAATACAGGGGTCAAACACAGACTAACAGTTTTAGAAAGTGAAAAAGTTAAAAAAGAAATGGGGGCAGTGG
GTTATTAGAAATAACATAAATGGCTGGTATGTTTTGTCTGTGCTCCTACCCAAATTTTCATCTCGAATTGTAATCC
CCATAATCCCCATGTGTCTAGGGAGAGACCTGGTGGGAGGTGATTGGATCATGGGGGTGGTTTCCCTACGATGT
TCTCCTGATAGTGGGTGAGTTCTCACAAGATCTGATGGTTTTATAAAGGGCTCTGCCCTTTAACTCCTCACTCT
TTCTCCTGAAGCCTTGTGAAGAAGGTGCTTTGCTTCCCCTTTGCGTTCCCCCATGATTGTAAGTTTCTTGAGGCC
TCCCTGGCCATGCTGAACTCTTCAGTCAATTAAACACTTTCCTTTATAAATTAATAAAAAAAAAAAAAA

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FIGURE 1430

MEKIEEQFANLHIVKCSLGTKEPTYLLGIDTSKTVQAGKENLVAVLCSNGSIRIYDKERLNVLREFSGYPGLLNG
VRFANSCDSVYSACTDGTVCWDARVAREKPVQLFKGYPSNIFISFDINCNDHIICAGTEKVDDDALLVFWARM
NSQNLSTTKDSLGLAYSETHSDDVTQVRFHPSNPNMVVSGSSDGLVNVFDINIDNEEDALVTTCSISSVSCIGWS
GKGYKQIYCMTHDEGFYWDLNHLDTDEPVTRLNIQDVREVVMKEDALDYLIGGLYHEKTDTLHVIGGTNKGRI
HLMNCSMSGLTHVTSLQGGHAATVRSFCWNVQDDSLLTGGEDAQLLLWKPGAIEKTFKKESMKIASSVHQVRV
HSNDSYKRRKKQ

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FIGURE 1431

GAAATAATGAAACGCTCTTTGTGGTCCGGGGCTGAGACCCACGAGGAGACTGGCGGGGATTTCTGGCGTTAGGAGGC
 GGGGCTTTTCGGCTTTGGGCGCGAGTGGTTTAAAAGACAGTTGGTGTTCGGTTTCGGCTTCGGGTTCGGATTCCGCG
 GTCCCCAACCCCTTCCCCATGGCCGACCCTGAGGAGTTGCAGGTTTCTTCGCCGCCGCCGCCCTCCCTCTTCTCC
 CTCCTCTTCAGACGCCTCTGCAGCATCTTCCCGGGCGGCCAGTGAGTTTGGGCTGGCCAGTTCCGAGCAGGAG
 CAGCGGCCCCAACGGTGGACCAGCTGGAGGAAGTGGAGCTGCAGATCGGAGACGCAGCCTTTTCATTAACCAAAT
 TCTTGAAGCCACATCTGCAGTATCAGCTCAAGTGGAGAAGTTCGCTTCAAATGTACAGAAAATGCACGTTTCCT
 TAAAACGTGGCGGGACCTCTTGAAAGAAGGCTATGATTCTTTGAAACCTGATGACTGATTGGGCATACCTCGTTG
 TTTAATAATGACTGCAATAATTTCATACTTCTTATGTCATATTTGTACATGTACCACACATATAGGATGACCTC
 GTCCAGCAGTTCTGTATATACTCAGAATGAAATTTTCTTGGTTTTCTTGGTTTTGTGAAAGCAGAATACCGAI
 GCTATTTTTTGTTCGGGACCAGTACTTGTTCCTTAAATACCTTATGCCTCTGAACCTTTCATAGAATCCTTTAT
 GAAAGTTAACTTCATCAATAGACGGTTAATATTAATAGAGCCACAGTGCTACCAGTAGCAAACCTAGGTAGACCAT
 TATTTGTTTTGCAACAAGATGCTAAGCATGGCAGACTTTGAAGTTGCGTTTCATCTTAAGGACCAAGGGAGGTAA
 CTTTAAGGTTGCCAGTGGTGGATCCAGCTCCGTTAGGCTAAGTTGCTACAGCTAATGATTGTGTCTTTATTCTA
 TATCCCCAGCACCTAAAACAGGGTCACACAACATTCACATAAATGTTTGTGAAATAAAAGAGTTAACAAACATAAT
 TGAAAGCTTTTTTCTTCTATATTTAGCATGAAGACTGTCATTGTTTCTCTAGGAAATGTATGAATCTGAACCT
 TTTTGACTTGAAGAAAAACATTCTTTTTTTACAGAGATTTGGACTTTGATGATAGGTTTTAAAAATATATGATAA
 ATATTTTTTGTACTTGTGTTTTTTTTTTTTAAAGACTTTACTTCAGAAAGGGAAAGACTGTTTAGAAAGAATGC
 ATATTTTTTCCCTATTTATTTCTGTGGTTACTGCTTTTGCAGTTTAACAGTGTTTGTATTGATATTTGTATATG
 TTTGATTGCTATCTTTAAAGTGCCCTATCAGATTTATGGCTCTGTGCTATTACTTTTTTGAGCTTTGCAAGTTGTG
 TACATAATAATTCTAAAGAAGTTACTTTGTTTGCAATGCATCAAATTTAAATGATGTGATTTTTTTTTGTATTATT
 TGATCTTAGTGACAGTGTTCTATTTTGCATCCGTATCTTAAGTTGCTTTTGGTGTGTTGTGTGTGCAACG
 ATTAAGCCAACTAATTCTCTACCATATATAAATCTTGGACATTTTGTATACAACATCTTAATTCCTTGTAGATAT
 GGAGATAGGTACAGAACTATATTCTAATGCCCCACAATGGGGCTATGAGAGGGGACAGATGGATGGGCAAAGAAT
 AGTTTTGTTTAAACATATTAGGTCATAGTTCTTGATTAGTTTTTTTAGTTAAAGATAAACACATAGGGTGTGATTT
 CTATACCAAAGATATGCTTATTTTCAGTATTAGAAAAATATTCTTCTTACATCTCCTGAAAATTGCAATTTTTTAAA
 ATGTGTAAAAATAAAATTATTATTAAGGCACATTTTATTTCCATTGTTTGGATTTCATTACCTTAAAACCTTTATT
 GACATATTTCAAAGATATAGGAAAGGTAAATGATTTCAAGAAAAATCCGTGTATTTCTACCATGCAGATGTAATAA
 ATGTTAGCATTTGGCTATATTTTCTTCAGACACACATATGCATGTAATTGCAAATGTTAGATACATTTGAAGTTT
 GCTTTGTTACCTGTTTGATCCGTGTCCTGTTCCCTCCCTCCCGAGAGTCCCGAGAGGTAACCACTAGAGGGGGCATA
 ATATAGCATGTGTTTTTATATTTTTTAATACAAATATATTTTTTAAAAGCGCTACAAAATATTGTTTTATATATGT
 GGTAGCCAGCTTCCAGATGGCCCCAGTGATCCCTGGCTCCTGGTGTTTCATGCCCCAGTATAGCCTTCTCCTGCA
 TTTTACAGTGCTGACTTTTGTAACTACCAGGATATTGAGCAAATGCAGTGTGTGATTTCTGAGGCCATANNNNNN
 NNN
 NNN
 TTTTGTCTCATTTTTCTAIGTTGTTTTTTTTTACTTGTGAGTTTTCAGATATTACATATTTGAATACTAATGATC
 TGTATGTATGTTCCAATTATCTTTTTTAGTCTGGTTTGTCTTCATATTTGGTTATGAAATCTTGAATTTTTTAA
 AACGTAATTTTTACCAATCTTTCATAATGATTGCTTTTTCTGGTTTTTGTATAGGAAATGTCATAAAAAATAGTC
 CTATTCAGCCTTCCAAAAGTTACAAAATTTTGGTTTTAACATTTAGATGTTTAGTCCAAGTAAATGTTTTCT
 TTTATGGCATGATTTTGGAACTTGTGTTTTAATTATTTTACATATTTATAGCTGTTCTCCCAAGTATCAATTTTT
 CAAGTGCAACATCTGTGATGCAGTTACTATGTAAGGGCCAGATTCTGACCTTTCTGTTCTTTTTATCTGAAGGAA
 ATTTGAACATGCCACCCCCAAATATGCCGATTGGCATACTGATTATTTTCGAGCTAAAGGTGCTTGACTAACAGT
 AGTTGCAGAAATGGCTATTTTAACTGTCTTTCTACCTGTAGCAAGCCATACAAAATCTTTGATAAAGATGCT
 TTCCTGATACCAAGATGAGAAGATGGCTCTAATCAGCTGAGACAGCACCAGAGGAATCTACAAAACAAGAACTAT
 TAGTTTCTTAACATATATTTACCTTCCACAGTTTCTGCCTCTGGAAGCCTAAAACTGCTTTCTTCTCGTCTTGTC
 CACTTCTCTGAAATGTATTCTTTGTGGAAGATGCTATATAGTCCAGAGTTGTAAGCCACTACTTGTGTTTACCTT
 TTCATTGAGTTTTCTCCTGTGTGATGTACGTTGCATATATTAATAAAATTAATTTGTTTTTCTCTT

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FIGURE 1432

KMKRLCGPGLRPTRRLGGISGVRRRGLSALGASG

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FIGURE 1433

GTAAAGCATTGCTTGAGGTTGCCAGGTAGTTTCGCCCTTACACTTCTTGTCCTCCAGTGCAATTATTAGTAGAGCTC
CCTTTCCTGCTCAAATTTCCGGTTGGGGATAAAATTGCATTGTCGTTTTGGTTTGAGATAGGAAGATGAGGGGAGG
AAGGAGGTGAGGCGGTAAAGGGCGTTCTCTCTCTTGGGTCCCGCGCCCAACTTCCGCTGGCCCAAAGAACTATA
ATTTTGAACCAACAGACCTCTGCTGGCATCTGCGATTGCATTTTTCTGTGTTTTAACAACGGCTGTGCTAGACGAA
GTGGTGAAGCCCAAAGACTTATTTTTGAGCTCGCTGTAAGACTGAGAAAATCACGTAGTCCTTCCTGAAACCACTA
AGAGGAAAAATGCTCTGTGACACTGCATACAGATGTAGGTGATATTAAAATTGAAGTCTTCTGTGAGAGGACACCC
AAAACATGTGAGATGGAGTCTCGCTGTGTCCCCAGGCTGGAGTACAATGGCGCGATCTAGGCTCACTGCAACCT
CCGCCTCCTGGGTTCAAGCAAGTCTTCTGCCTCAGCCTCCCGAGAAGTGAAGAGGAGGCAACAGTATTTGGGGC
AAGAAGTTTGAGGATGAATACAGTGAATATCTTAAGCACAATGTTAGAGGTGTTGTATCTATGGCTAATAATGGC
CCGAACACCAATGGATCTCAGTTCTTCATCACCTATGGCAAACAGCCACATTTGGACATGAAATACACCGTATTT
GGAAAGGTAATAGATGGTCTGGAACTCTAGATGAGTTGGAGAAGTTGCCAGTAAATGAGAAGACATACCGACCT
CTTAATGATGTACACATTAAGGACATAACTATTTCATGCCAACCATTGCTCAGTAGCTATGATAGACCTGGACA
AATAACTTGACAAATTGCTGGAACACACTTATTGTGGTTTACCCGGTTTTAATTATGAGCCAGCTTGACGTGGTT
GTGGCCGTGGGGCGAGATGAAGCTACACTGTGAGGTGGAGGTGATCAGCCGGCACTTGCCCGCCTTGGGGCTTAG
GAACCGGGGCAAGGGCGTCCGAGCCGTGTTGAGCCTCTGTGAGCAGACTTCCAGGAGTCAGCCGCCGGTCCGAGC
CTTCTGCTCATCTCCACCCTGAAGGACAAGCGCGGGACCCGCTATGAGGATTCCATATGGCTCTCATATCATTC
CATTCCATCTCTGCCAAGATTTGGATACCGCAAAAATTTGTGTTTGTGGAAGATTCTGTCTGAACTCTTTCATTC
AAGGAACTACTACCATGAATCTGCATTCTGTTGCCACACTGTGGTCTTAGTAGATAATTTGGGTGGTACTGAAG
CACCTATTATCTCTTATTTCTGTTCTCTAGGCTGTTATGTTAATTCCTCTGATATGTTAAAGTAATGGGTGAGAC
CAGAAAAAGAAATTTCAATAACAGATCAGTTTGGGGTGATGTATGATTTTGCAGCGTCAAATTGGAGTAAGGGA
AGATTTCTGTATACTTGCTGGAGAGGAGGAATGTGTATAGTTACTCATTTAGATGACTCCAAAACCTTTTATTAAA
ACCAATTTTAGTTTT

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FIGURE 1434

MSVTLHTDVGDIKIEVFCERTPKTCMESRCVPQAGVQWRDLGSLQPPPPGFKQVFCLSLPRTGRGGNSIWGKKF
EDEYSEYLKHNVRGVVSMANNGPNTNGSQFFITYGKQPHLDMKYTVFGKVIDGLETLDELEKLPVNEKTYRPLND
VHIKDITIHANPFAQ

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FIGURE 1435A

CTTGGCTCTCTGTGCCTCAGTTTCTCATCTGTAAGGTGGGGATAGATGATGGCAATACCTGCTTCAGAGAGTGAA
AATTAGATGAGATGATGTCTGTAAAATTACGTAAGACGGTACCCAAAAGTAGTACTATTTTTCCCTTTTCTTATT
AGAGCAGGTTGGGCACGTTTTGATGTCCGTGGGAATGAGCAGGTAGAGAGGGTGGTATTGAGGCTGGAGGGGAGA
GAAGGGACCCACAGATGGGGAGAGAAGTCTTGGGTGCCTGTTTTATCCCAAACCAGGGGAAGGAGGGAAACAGGTA
GGGCTGGCTGCAGGAAAGCTTGCAGGTATGGGGTACACAGTTAAAAGGGAGTGTCTTCTGATAGTCTTGATGCAG
GCCTGGAGGTCGTTTGTTATGGGGGTGGAGGTCCTGATGTACATTGTGGCGGTAAGATGCCGTGCTGTCTTTGCC
ACCAGCCTGTGGCAGCCCTGGTGTTACACCAGGGCAGGTGGGCAGTTTAATGTATCTCAGGCCAGATGACCTGCC
CTGCCCACCTGTTGAGGCTCCAGTAGATAGACGTGAAAGCACAGTATAAGCATAATGCACCACTTTAATCCTTTT
CTCTGAGGAGCTGGAAGGCCTGTAGTCACCATCTGAGCCAAATGTCATTCAAGTACTTCACTTGGGTTACACACC
ACACTTTGACCCACTATCTCATTTAGTCATCACAACAAATGGGTGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAACCACTGTGAAAGTTTGAAAACCTCTGTAGCAGCCAAG
CAGGATGGAAAGATGTGTAGGGATTGTCTTCTCCATTTGATAGATGAGACAAGAGCTGGGTACTCTGATCTCCAT
CCCAAGCACACAGAGCTTGGGGCCCCACAGGCCTGGTGTGAATCCCACTCCACTACCAGAGGCTGTGTGCCTTTG
GACCAGGCATCTTGCTTCTCTGACCCTATATACAGCTGCAGAAGAATTCCTTGCAGGTTGCTGTAAGGATTTGGA
GGGAAACTGTTGCCCAGCACACAGTACACATTCTGGGAGCCATCGTTTTCCCCAGTGCACCTTTTCTGCAAATGTG
GATCTACATCCCACTTGATGCTGAGACCAGCTGCTGTGATCTTGCATTTGTTTAGCGCTTGTCTCCTTGAGG
CAGTAAAGTGGTGGCACCTGACCGGAGCATGTAGCCACCTATGACTTCCTGAGTGGGGTGGTGTGGGGAGGGCCC
TGAGGAGTCTGTGGTCTTAGGCCCTTGATTTTATCAGGGCTTTTCTGCTCCTTCTGGTGCCTCAGTCCAGGCA
AGATAGGGTCCCAGAATCTTACAGCCCAGAGGCCACCTGTTGCAACTTCTTTTTTACAGATGGAGTCATCAGAAC
CCACTGTGAGGAAGTGACTTCTCCTTGAGGTACCCAGACACTCCAAACAGAGCAGAGCAAAAGCGCCTAGAACT
TGAAATTTTGGACCTGTCTCCAACACCCTGGGGATTTCCACCAGGAAGCCTTCAGTCACCATCCAGGGGATTTTT
ATCGCCACAAAGGGTAATTCCTGCTCCATCCCTGCTGTGACTCAGCTGTGACGTTGAACCACACAAGCCAGAGAG
AAGAAGATAAAGTCATCAGAGCTCCTACTCACCAGAGAGTGAGGCCCAGGCCAGGACTCCACAAGGCTGGTCCCC
TGCCCTGGAGCAACTTAAACAGGCCCTCTGGCCAGCCTGGAACCTTGAGATGGCCTCCAGCTCAGGCAGCAGTCC
TCGCCCCGGCCCCTGATGAGAATGAGTTTCCCTTTGGGTGCCCTCCCACCGTCTGCCAGGACCCAAAGGAGCCCAG
GGCTCTCTGCTGTGCAGGCTGTCTCTCTGAGAACCCGAGGAATGGCGAGGATCAGATCTGCCCCAAATGCAGAGG
GGAAGACCTCCAGTCTATAAGCCCAGGAAGCCGTCTTCGAACCTCAGGAGAAGGCTCACCCCGAGGTGGCTGAGGC
TGGAATTGGGTGCCCCCTTGACAGGTGTGGGTGCTCCTTCAAGGGAAGCCACAGTCTGTGCAAGAGCATGAGGT
CACCTCCCAGACCTCCCACCTAAACCTGCTGTTGGGGTTTCATGAAACAGTGGAAGGCCCGGCTGGGCTGTGGCCT
GGAGTCTGGGCCCCATGGCCCTGGAGCAGAACCTGTACAGCTGCAGCTGCAGGCAGCCGTGGAAGTGGCGGGGGA
CCTGGAGGTGATTGCTACCGGGCACCCCTGCTCCGAGAGCCAGGAGGAGCTGGCCCTGCAGCACTTCATGAAGGA
GAAGCTTCTGGCTGAGCTGGAGGGGAAGCTGCGTGTGTTTGAGAACATTGTTGCTGTCTCAACAAGGAGGTGGA
GGCCTCCCACCTGGCCCTGGCCACCTCTATCCACCAGAGCCAGCTGGACCGTGAGCGCATCCTGAGCTTGGAGCA
GAGGGTGGTGGAGCTTCAGCAGACCCCTGGCCCAGAAAGACCAGGCCCTGGGCAAGCTGGAGCAGAGCTTGCGCCT
CATGGAGGAGGCCCTCCTTCGATGGCACTTTCTGTGGAAGATCACCAATGTCACCAGGCGGTGCCATGAGTCGGC
CTGTGGCAGGACCGTCAGCCTCTTCTCCCCAGCCTTCTACACTGCCAAGTATGGCTACAAGTTGTGCCTGCGGCT
GTACCTGAATGGAGATGGCACTGGAAAGAGAACCCATCTGTGCTCTTTCATCGTGATCATGAGAGGGGAGTATGA
TGCGCTGCTGCCGTGGCCTTTCCGGAACAAGGTACCTTCATGCTGCTGGACCAGAACAACCGTGAGCACGCCAT
TGACGCCTTCCGGCCTGACCTAAGCTCAGCGTCCTTCCAGAGGCCCCAGAGTGAAACCAACGTGGCCAGTGGATG
CCCCTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCCTACGTGAAGGACGACACAATGTTCTCAA
GTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGGAGCTCCAACCTCAGAAGGGAGCTAGCCAGA
GACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAAGATGGGTGAAGGCTGGCATGATCCAAGCA
AGACTGAGGGGTCGACTTCGGGCTGGCCATCTGGTTAGGATGGCAGGACGTGGGCTGGGCCCACAAAGGCAAAGG
GTCCAGAAGGAGACAGGCAGAGCTGCTCCCCTCTGCACGGACCATGCGACACTGGGAGGCCAGTGAGCCACTCCG
GCCCCGAATGTTGAGGTGGACTCTACCAAATGAGAAGAAAATGGAACCAGGCTTGGAACCGTAGGACCCAAGCA
GAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGACCTGGACACAGGCCTGCTCTCTTTTCTC
CAGGGTCAGAAACAGGACCGGTGGAAGGGATGGGGTGCCAGTTTGAATGCAGTCTGTCCAGGCTCGTCATTGGA

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FIGURE 1435B

GGTGAACAAGCAAACCCAGACGGCTCCACTAGGACTTCAAATTGGGGGTTGGATTTGAAGACTTTTAAAGTTTCCT
TCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAGTCCTAGAGCTACAGGGGTTCTGGAAACAT
TCAGGAGCTTCCTGTCTCTCCAGCTCCTCACTCACCTTCAGTAACCCCCACTGGACTGACCTGGTCCACAGGGCA
CCTGCCACCCCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAGCACACCCAGCCCCCACATCCTGTGCCTCC
ATCAGCTAAACACCACGTCACCTTCATGCAGGTGAAACCCAGTCACCTGTGAGCTCCCAGGTGCAGCCAGAGGCACC
TCAAGAAGAAGAGGGGCATAAACTTTCTCTTCTGCTAGAGGCCCCACCTTTGGTGCTTTCCAGAATCCCGTA
ACACCTGATTAAGTGAAGCATCCACTTCTTTTCAGCAGACTGATCAGGACCTCCAAGCCACTGAGCAATGTATAAC
CCCAAAGAAATAATTTTTAGAACTCTTTTCGAAGTTTTCTTAAAGTGATGGTTTGGGAGTTGTTTGTACTGAGC
CAGGTTTGAAAAGGCCATTGCTGAGTTTGAGGTGGTGCCACCAGTTTTGTCAGGTGGCATCAGAGGCTGGCATGCT
GGCAGGAACATCCCTCTTAGCCCCAGTCTTCTCTTTCTATAATGAGACCCACCCAGCTTGCCTCCCTCCCTG
GCTTCTCTGACCCTCAAAGGAGATGCCACGCAGGACAGACTGGAGAGAGAAGCCTGGGCAATACTGCCCGCTGT
CATGGCCTGGTGGTGGCCACACCTATCTTCTACCTTGGAGGCCACACCCAACCTTTCCAAAGACCCTGAGACAA
GTCAGGACCCTACTACTCTCCCTGCTGCTTTCTGACAGCTTACTCTTCTCCACCTGCTGAGCCTGTGCCAGA
CTCCATTGCTCAAATCGTTAGGGTTGCTTCTATAAAAAATGGGTCAGTAGCCCTTCTGTTCTCTCCAGCCCAGCA
TACAGGAGGATCAAAGGAGGTGACGAGCATCGTGGCACGGCAGTCTCAATGGGTGAGAAACCCAGGCCAGCTGG
GCTCTAAGCCTGGCATCCTGTATGCTTAGTCCTTCAGCTGAAGATCAGAGGAAGCCTCTCCCTTGCCCTCTCCA
GCTCTAGGGGTTTTTCAGGAGGCCCAACTGCAATAATGGAGCACTAGTGCTTTTATGTGCAATGGTGTCTGCTCCATG
CACGACAGCAGCAAACATTCTGGGGCTGCTTTTTATTGTTCCACGGCTGACAGCGTGGCAGCGGAGACTGTGGA
GGCAGTGGAGACTGACTTCTTCTGCTGACAGCTGGATGTACACATGAAGGTCTGGCCTAGCGAGTGATGGGTC
TAGGCCCTGAACTGATGTCTAGCAATAACCTCTTGATCCCTACTCACCGAGTGTTGAGCCCAAGGGGGGATTT
GTAGAACAAGCCCCCATGAGAAACAGCTGTTACTCTACACTTTTGATTGCCTATTTCTGATGGCAAGAGATACAT
ACTCTCTTCAAAGAGCATGAGATGCAGCCATTCTTTCAGCAAAGCTTCATTGACACCTGCACCTGTTAACTGTGT
TCGACATTGAAGGGAGAAAGGCAAGATGTGCACTCTGGACTCAAGAACTCTTAGTTAGTGGAGGAAATGAGCA
GATAAGTAGATCATTATGATTGAGAGTAGGAGAAGCTTAGAGAAAGCACAGAACCCAGATCCAGCTGGTGAAGG
AGGGAAGGCTTCAGGCCTTTAAGCTCAGCCTGAGAATATTGTGAAATGCAGAGGATGGGGAAAAGGGAAGAGTAC
CGACTTGAAAACGGAGAGCTGTCTTGGCTGAGGGCAGGGTCTGTGTGGCAGGATGGGGGAGGGAGTCAGAAGGGT
CAGATGAACTGGAGTGTAGACAGCATCAGATGCAGCAGTGCCACCGCCCCCCCCCAACCCCCGCTGCCCCA
CAGAGCACCTGCTGGTAACCTGGGCCTATTGAAAGCAGGATGAGATGATAATTTAAGACACTGAATGATTTCTT
TTCCAACAAGCTCTATGTTAAGTGCATCAAAGATGTGACATTGCATCTTTTACAGGTGATTCAAGGGTGGGGGA
GGCAAGATGCAGGCAAAGCCACCGTTTCACTGGGTGGATTCAAGTAGGTCCCCACCCCCAGCAGTTCCCGAAGGT
GCTGGGGAGATTTTTAAACACCAAGTGACAGAATCTACCCCCGTAAGTGATAAAGCCTGAGCATCAGGATGAAG
TCTCTGCAGGGGAAGGTTCTGATGCCCCAGTCAAGTCTGACTGGCCGTTGGGGGCGAAAGGTGTGACTGAAGCA
CTGACAAGGTGGGTGGAGGCACTAACCTGTAACACCTCCTCTGGCTTGGAAAGTTTTGCTTCATCAACTACAGCT
GGAACCTCCGGGGGCAAGGCAGAAGGGCCAGAACAGGGAGGTCTTCTACTGAGGGGCTGTCTATCGATGCTCCTGAG
ACATTTGTGGAGCTTCTGGTATACACAGTGCAGACAGTTTCCCTGAGAAGCTGATTGTCTAAAAGTGACACAAA
CCCTCTTCTGCCACGTGCCCCCGAAAAGCCCATCAGAAACCTGAATGGCTTCCCGTTGCCAACTGAAGCATCCT
CACCTGTACATTAGAACCCCTGCGGAGACTTCATCCTGATGCTCAGGCTTTATCACTTAACAGCCCCCTGAAGT
GCACTTAGAATACCAGGTGCTGCCGGCTCCTGGGTCTGGCCATAAGGTGCGCTCCTTACTTGGTTTTCTCTGACTC
CTAATCCAAATGAGCCAAGGGTCTGAGGGGCTGCACAGGCAGTAGGTGTGGAGCACAGCTCTGAGCCCAAGCCTG
GGCTCCAAGCTGCGCTGCTGCTGTAGGGCCTGATCTCCACCTATCCCTTCCCTGCAGGTACCTTCATGCTGC
TGGACCAGAACAACCGTGAGCACGCCATTGACGCCTTCCGGCCTGACCTAAGCTCAGCGTCTTCCAGAGGCCCC
AGAGTGAAACCAACGTGGCCAGTGGATGCCACTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCCT
ACGTGAAGGACGACACAATGTTCTCAAGTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGGA
GCTCCAACCTCAGAAGGGAGCTAGCCAGAGGACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAAG
ATGGGTGAAGGTGGCATGATCCAAGCAAGACTGAGGGGTGCACTTCGGGCTGGCCATCTGGTTAGGATGGCAGG
ACGTGGGTGGGCCCACAAAGGCAAAGGTCCAGAAGGAGACAGGCAGAGCTGCTCCCTCTGCACGGACCATGC
GACACTGGGAGGCCAGTGAGCCACTCCGGCCCCGAATGTTGAGGTGGACTCTCACCAAATGAGAAGAAAATGGAA
CCAGGCTTGAACCGTAGGACCCAAGCAGAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGAC

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FIGURE 1435C

CTGGACACAGGCCTGCTCTCTTTTTCTCCAGGGTCAGAAACAGGACCGGGTGGAAGGGATGGGGTGCCAGTTTGA
ATGCAGTCTGTCCAGGCTCGTCATTGGAGGTGAACAAGCAAACCCAGAGGGCTCCACTAGGACTTCAAATTGGGG
GTTGGATTTGAAGACTTTTAAGTTTCCTTCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAGT
CCTAGAGCTACAGGGGTTCTGGAAACATTCAGGAGCTTCCTGTCCTCCAGCTCCTCACTCACCTTCAGTAACCC
CCACTGGACTGACCTGGTCCACAGGGCACCTGCCACCCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAGC
ACACCCAGCCCCCACATCCTGTGCCTCCATCAGCTAAACACCACGTCACTTCATGCAGGTGAAACCCAGTCACTG
TGAGCTCCCAGGTGCAGCCAGAGGCACCTCAAGAAGAAGAGGGGCATAAACTTTCCTCTTCCTGCCTAGAGGCC
CACCTTTGGTGCTTTCCAGAATCCCGTAACACCTGATTAAGTGAAGCATCCACTTCTTTCAGCAGACTGATCAGG
ACCTCCAAGCCACTGAGCAATGTATAACCCCAAAGAAATAATTTTTAGAAATCTCTTTCGAAGTTTTCCTAAAAA

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FIGURE 1436

MASSSGSSPRPAPDENEFPFGCPPTVCQDPKEPRALCCAGCLSENPRNGEDQICPKCRGEDLQSI SPGSRLRTQE
KAHPEVAEAGIGCPFAGVGCSFKGSPQSVQEHEVTSQTSHLNLLLGFMKQWKARLGCGLESGPMALEQNLSDLQL
QAAVEVAGDLEVDCYRAPCSESQEELALQHFMKEKLLAELEGKLRVFENIVAVLNKEVEASHLALATSIHQSQLD
RERILSLEQRVVELQQTTLAQKDQALGKLEQSLRLMEEASFDTFLWKITNVTRRCHESACGRTVSLFSPAFYTAK
YGYKLCLRLYLNGDGTGKRTHLSLFIVIMRGEYDALLPWPFRNKVTFMLLDQNNREHAIDAFRDLSSASFQRPQ
SETNVASGCPLFFPLSKLQSPKHAYVKDDTMFLKCIVETST

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FIGURE 1437

GGGGGCGCGGCCGGTTACTCGCTTACCGGAGGCTTCAGTCCCCGGCGGCGGCGGACAGCTAGGGTTCACGGCCA
CTGGGGCAGAGGAGCCGCGAGAAGATGTGGGTTTTTGGTTACGGGTCCCTGATCTGGAAGGTGGATTTCCCTAT
CAGGACAAGCTGGTCGGATACATCACCAACTACAGCAGGCGCTTCTGGCAGGGCAGCACGGACCACGCGGGGTC
CCCGGCAAGCCTGGAAGAGTTGTGACTCTTGTTGAAGATCCTGCGGGATGTGTATGGGGTGTGTGCTTACAGATTG
CCAGTAGGAAAAGGAAGAAGAAGTAAAAGCATACCTTGACTTCAGAGAAAAAGGAGGCTACAGAACCACAACAGTC
ATTTTTTATCCAAAAGATCCCACAACAAAACCATTTCAGTGTATTGCTATATATTGGAACATGTGATAATCCTGAT
TATCTTGGTCCTGCACCTCTGGAAGACATTGCTGAACAAATTTTAAATGCAGCTGGTCCAAGTGGAAGAAATACA
GAATATCTTTTTTGAACCTTGCAAATTCATTAGGAACCTTGTCGAGAGAAGCAGATGAGCATCTTTTCGCTTTG
GAAAAATTAGTAAAGGAACGTTTAGAAGGGAAACAGAACCTCAATTGCATATAATTTAGTCTTCAGAGAATTAAC
TTCAGTGCACAATGACAATATGATTTGGAAATACGTTTACTTAAAGATCTTATTTTTAATGTAGTGAGGATATTA
TTAAACTTTTATTTTAACTGGAAATGTCCTGAAACACATATTTAAATATTGGGATACAGTGAAAGAAAAATTC
AAATTTAATAACATAAAGATTTCTAACTTTATGTTATTGAACACTTACTACTAGAAAGTGAGTTCTTTAGAAA
AATACAGTGAAGGACTCAGTTCAGTCTTGTTTTATCAGAGTGATAATCATCCTGTTTCACATCCCAATACTATT
TTGAAATTCATAACAATTAAACCAAAATTCATAAATATAAGGTTATGCCTTCAATATATTCCTATACAATTCT
GTAACCATGGTTTAAATAACACAAGCTTAAATAACATGCTTAGAAATACACAATAATATGAACAGTATTTTCAGC
CTTAATTGTGAATTTCTTGTTATTCAAGTATTAAATGAAATCTTTGAGTTTTTAGCCAAAAATTGGCATTTTT
AAAATACGAAAATTTCTTGGAATTATAATGTACTGTACCTCTTCTTTTTTAAATAAAGGCATTTTACTATATGG
AAAACTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1438

MWVFGYGLIWKVDFPYQDKLVGYITNYSRRFWQGSTDHRGVPGKPGRVVTLVEDPAGCVWGVAYRLPVGKEEEV
KAYLDFREKGGYRTTTFVIFYPKDPTTKPFSVLLYIGTCDNPDYLGPALEDIAEQIFNAAGPSGRNTEYLFELAN
SIRNLVP EEAD EHLFALEKLVKERLE GKQNLNCI

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FIGURE 1439

GCTCAGTGGGGGCGGCTACTGCTCATGTGATTGTGGAGTAGACAGTTGGAAGAAGTACCCAGTCCATTTGGAGAG
TTAAAACTGTGCCTAACAGAGGTGTCTCTGACTTTTCTTCTGCAAGCTCCATGTTTTTCACATCTTCCCTTTGAC
TGTGTCTCTGCTGCTGCTGCTACTACTTACAAGGTCCTCAGAAGTGGAATACAGAGCGGAGGTTCGGTCAGAAAT
GCCTATCTGCCCTGCTTCTACACCCAGCCGCCCCAGGGAACCTCGTGCCCGTCTGCTGGGGCAAAGGAGCCTGT
CCTGTGTTTGAATGTGGCAACGTGGTGCTCAGGACTGATGAAAGGGATGTGAATTATTGGACATCCAGATACTGG
CTAAATGGGGATTTCCGCAAAGGAGATGTGTCCCTGACCATAGAGAATGTGATTCTAGCAGACAGTGGGATCTAC
TGCTGCCGGATCCAAATCCCAGGCATAATGAATGATGAAAAATTTAACCTGAAGTTGGTCATCAAACCAGCCAAG
GTCACCCCTGCACCGACTCTGCAGAGAGACTTCACTGCAGCCTTTCCAAGGATGCTTACCACCAGGGGACATGGC
CCAGCAGAGACACAGACACTGGGGAGCCTCCCTGATATAAATCTAACACAAATATCCACATTGGCCAATGAGTTA
CGGGACTCTAGATTGGCCAATGACTTACGGGACTCTGGAGCAACCATCAGAATAGGCATCTACATCGGAGCAGGG
ATCTGTGCTGGGCTGGCTCTGGCTCTTATCTTCGGCGCTTTAATTTTCAAATGGTATTCTCATAGCAAAGAGAAG
ATACAGAATTTAAGCCTCATCTCTTTGGCCAACCTCCCTCCCTCAGGATTGGCAAATGCAGTAGCAGAGGGAATT
CGCTCAGAAGAAAACATCTATACCATTTGAAGAGAACGTATATGAAGTGAGGAGCCCAATGAGTATTATTGCTAT
GTCAGCAGCAGGCAGCAACCCCTCACAACTTTGGGGTTGTGCTTTGCAATGCCATAGATCCAACCACCTTATTTT
TGAGCTTGGTGTTTTTGCTTTTTTCAGAACTATGAGCTGTGTACCTGACTGGTTTTGGAGGTTCTGTCCACTGC
TATGGAGCAGAGTTTTCCCATTTTCAGAAGATAATGACTCACATGGGAATTGAACTGGGACCTGCACTGAACTTA
AACAGGCATGTCAATTGCCTCTGTATTTAAGCCAACAGAGTTACCCAACCCAGAGACTGTTAATCATGGATGTTAG
AGCTCAAACGGGCTTTTATATACACTAGGAATTCTTGACGTGGGGTCTCTGGAGCTCCAGGAAATTCGGGCACAT
CATATGTCCATGAACTTCAGATAAACTAGGGAAAACCTGGGTGCTGAGGTGAAAGCATAACTTTTTTGGCACAGA
AAGTCTAAAGGGGGCCACTGATTTTCAAAGAGATCTGTGATCCCTTTTTGTTTTTTGTTTTTGAGATGGAGTCTTG
CTCTGTTGCCCAGGCTGGAGTGCAATGGCACAATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCAAGCGATT
CTCCTGCCTCAGCCTCCTGAGTGGCTGGGATTACAGGCATGCACCACCATGCCAGCTAATTTGTTGTATTTTTTA
GTAGAGACAGGGTTTCACCATGTTGGCCAGTGTGGTCTCAAACCTCCTGACCTCATGATTGCTGCTCGGCCTC
CCAAAGCACTGGGATTACAGGCGTGAGCCACCACATCCAGCCAGTGATCCTTAAAGATTAAAGAGATGACTGGAC
TAGGTCTACCTTGATCTTGAAGATTCCCTTGGAATGTTGAGATTTAGGCTTATTTGAGCACTACCTGCCCACTG
TCAGTGCCAGTGCATAGCCCTTCTTTTGTCTCCCTTATGAAGACTGCCCTGCAGGGCTGAGATGTGGCAGGAGCT
CCCAGGGAAAAAGGAAGTGCAATTTGATTGGTGTGATTGGCCAAGTTTTGCTTGTTGTGTGCTTGAAAGAAAATA
TCTCTGACCAACTTCTGTATTCGTGGACCAAACCTGAAGCTATATTTTTTACAGAAGAAGAAGCAGTGACGGGGAC
ACAAATTCTGTTGCTGGTGGAAAGAAGGCAAAGGCCTTCAGCAATCTATATTACCAGCGCTGGATCCTTTGACA
GAGAGTGGTCCCTAAACTTAAATTTCAAGACGGTATAGGCTTGATCTGTCTTGCTTATTGTTGCCCCCTGCGCCT
AGCACAATTTTGACACACAATTGGAACCTACTAAAAATTTTTTTTTTACTGTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1440

MFSLPFDCLLLLLLLLLLRSSEVEYRAEVGQNAYLPCFYTPAAPGNLVPVCWGKGACPVFE CGNVVLR TDERDV
NYWTSRYWLN GDFRKG DVSLTIENVILADSGIYCCRIQIPGIMNDEKFN LKLVIKPAKVTPAPTLQRDFTAAFP R
MLTTRGHGPAETQTLGSLPDINLTQISTLANELRDSRLANDLRDSGATIRIGIYIGAGICAGLALALIFGALIFK
WYSHSKEKIQNLSLISLANLP P SGLANAVAEGIRSEENIY TIEENVYEEVEEPNEYCYVSSRQQP SQPLGCRFAM
P

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FIGURE 1441

TCGACCCACGCGTCCGACTTCGGAACTGAATAAGGTGATTAGTGACCTGACTCCAGTCAGTGAGCTTCCCTTAA
CAGCCCGACCAAGGTCAAGGAAGGAAAAAATAAGCTGGCTTCCAGAGCTTGTCTGGTTAAAGAAGAAAGCCCAGT
ATGAAGCTAATAAAGTGAAATTATGGGGCCTCAACACAGAATATGATAATTTATTGTTTGTAATCAACTCCATCA
AGCAAGAGATTGTAAACCGGGTACAGAATCCAAGAGATGAGAGAGGACCCAACATGGGGCAGAAGCTTGAAATCC
TCATTAAAGATACTCTCGGATTTGTCCTACAGCTTAGTATTGTGGTTGACAGCGATACTAGGGCTGACAGCACAG
AAGTCACAAGAGAAGAGTGGAAGGGCAAGAATTCAAAGCATTTGTTCATACAATGTGGCAACCTCTTTTGCATAG

TTGCGTAGGATCCTGTTTGTAATGCTATCATAAATATTCTGTAGTTTTTTTTTTTTTCTCTCCCAACTGGAGCTAT
GACACTTTTTATTGGATTCAGTCTTGTCTCTTGTCTAGAAAGAACTTTATCTTGTTGACGCATGAGCTGTTTAAA
AATTATCCTATTAAATGTTGGTTAATAGTTGTGCAGTTTTTCATTTTCAGATGGAAAGGCAATGCAAATTTGCCT
TTGTTTTCTGTCACCTTCCAACCCCTGAGCACTTCTAGTCAGATACAGATTCATCAGTGTATGCAACATCCTTTG
TAATTTAAAATAAAAAAAGATGAAAAAAAAAAAAAAAAAAGGGCGGCC

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FIGURE 1442

MREDPTWGRSLKSSLKILSDLSYSLVLWLTAILGLTAQKSQEKSGRARIQSICSYNVATSFA

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FIGURE 1443

AAATTTTTTCTACTAGCTACTGAGGCTGCCACATCTGGATGGAAGTGAAGTGGAGGGGGAAAAGAATGAAAAAC
TCAAAAAGAAATCCCATGAGGGTGTCTTGCTTTCTCTCCTGAGTTACAATACTTTAGCAAAATCATGAGGCTTTAG
AGATATGGTGTAGTCTGCAAACTTCTTAATGCCCTTACCCACATTTACCATGTTTCCTGGCCTTCCTCTGTGTCA
ACTCTTAGCTCTTCCTAATCATTATTTAATACATGAGTGAGTTTAGTAGTGATCATATTTCTCAGGTCCTTTAGA
AGCTGGAATTTTAAAAGAATTAGAAGGAGGAGTATGTGAATTCTTTGGAGCTCACTGCCTGACTTGCTTATGACC
AGGAAAATCTATCCCCTGTATCTAATTTTAATTTTCATGGTTAAATTTGAGAATTGTGGAAACCAAGTTCACAAG
GCTATTCTCATATTTCTCCCAATTTCTTTTTCAGCCAACCTCCAAGGATATGTATCACCTTTGACTTAATTTGCTT
TCTCTAAGGGAAAGGGGAAAAAATGTTACATAGCTCCACTGCAATGTTTTTTATAATAGAGGAGAGATATTGTA
AATAGAGACTGCCAGCCAGTTTCCACAAAAAACGAAGAGTTCATAAATTTGACATGTTTGAACCCATAAAGCAT
TTTCTTTGCTTGAACCATTTATAAAAGTAAGTGAGTTTTTCAGGCTCTATATACATTTTAATTCCTCACGTTTTAT
ATTGGAGAGTTCGGTACAGACTGTCCATTACTGCACCAAAAGAATGAGTGAAGTGTACCTATAGGGAAAGAACA
CTTCTTCTCCTGCTGTTTGGGAACCATCTCAGTGTGGCGTAATGGTTAGGAGTACAGATTCCAGATCCTGTTTC
TTAGATTTAAATCTTGACTCTGCCACATACTAGCTGTCTGACTGAACCTTGGNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNCAGTACTTACCTCATAGAGCTGTTGTGAAAAGTGATGACTGAATATGTAAAAGCAC
CCTAGAAACAGTGCCTGGCACATGCTAAGTGCTTTGTTTCATTATTGTTGTTATTATGTAATTTCTCTCAGACTG
AGAGCACTGTTAGTGACCCAAGTAAATTTATAGTTTTTAAGTACAGAGGAAAAATAAAGCCTATTTTTTGTTAAC
AGTCTTAATAAATAATAAAATGGAATAAAGAAACCAAGACCCCAAAAAA

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FIGURE 1444

MTRKIYPLYLILISWLNLRIVETKFHKAILIFLPISFSANSKDMYHL

[illegible]

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FIGURE 1446

MFCHLGDKSSCXXX
XXQ

1599/1629
FIGURE 1447

TCATCAGCACAGCAATAGATCTAACGTTCCCGCCAGGGGTACTGGTCAGCGTTGGTTCTTTAGAAAGCCTGTGTA
GAATCGATTAAAAATTGCTCAGCACTTACTACAGCCATTTTCAACCAAGAAAAAATAATTTTCGGGACTCACTT
ATATTCCACAGTTTAAATATGGACAATTAATAGGTCAAGGTCCAGGCTGGAAGGGGACCACTTCGAATCTTGAAT
GCAGGGGGCAAACAGCTCAAGACACCATGGCTGATGAAGACGCTATGTACACGCTTTCAGTATGAAAACCAATGA
GCTACATGGGGCTGGCGAACAC

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FIGURE 1448

MKTNELHGAGE

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FIGURE 1449

AAAACCTTGAGGTGATTTCATCTTCCAGGCTCTCCTTCCATCAAGTCTCTCCTCCCTAGCGCTCTGGGTCCCTTAAT
GGCAGCAGCCGCCGCTACCAAGATCCTTCTGTGCCTCCCGCTTCTGCTCCTGCTGTCCGGCTGGTCCCGGGCTGG
GCGAGCCGACCCTCACTCTCTTTGCTATGACATCACCGTCATCCCTAAGTTCAGACCTGGACCACGGTGGTGTGC
GGTTCAAGGCCAGGTGGATGAAAAGACTTTTCTTCACTATGACTGTGGCAACAAGACAGTCACACCTGTCAGTCC
CCTGGGGAAGAACTAAATGTCACAACGGCCTGGAAAAGCACAGAACCCAGTACTGAGAGAGGTGGTGGACATACT
TACAGAGCAACTGCGTGACATTTCAGCTGGAGAATTACACACCCAAGGAACCCCTCACCTGCAGGCCAGGATGTC
TTGTGAGCAGAAAGCTGAAGGACACAGCAGTGGATCTTGGCAGTTCAGTTTCGATGGGCAGATCTTCCTCCTCTT
TGACTCAGAGAAGAGAATGTGGACAACGGTTCATCCTGGAGCCAGAAAGATGAAAGAAAAGTGGGAGAATGACAA
GGTTGTGGCCATGTCCTTCCATTACTTCTCAATGGGAGACTGTATAGGATGGCTTGAGGACTTCTTGATGGGCAT
GGACAGCACCTTGGAGCCAAGTGCAGGAGCACCACTCGCCATGTCCTCAGGCACAACCCAACCTCAGGGCCACAGC
CACCACCCTCATCCTTTGCTGCCTCCTCATCATCCTCCCCTGCTTCATCCTCCCTGGCATCTGAGGAGAGTCCTT
TAGAGTGACAGGTTAAAGCTGATACCAAAGGCTCCTGTGAGCACGGTCTTGATCAAACCTCGCCCTTCTGTCTGG
CCAGCTGCCCACGACCTACGGTGTATGTCCAGTGGCCTCCAGCAGATCATGATGACATCATGGACCCAATAGCTC
ATTCACCTGCCTTGATTCTTTTGCCAACAATTTTACCAGCAGTTATACCTAACATATTATGCAATTTTCTCTTG
TGCTACCTGATGGAATTCCTGCACTTAAAGTTCTGGCTGACTAAACAAGATATATCATTTTCTTTCTCTCTTT
TGTTTGGAATCAAGTACTTCTTTGAATGATGATCTCTTTCTTGCAAATGATATTGTGAGTAAATAATCACGT
TAGACTTCAGACCTCTGGGGATTCTTTCCGTGTCTGAAAGAGAATTTTAAATTATTTAATAAGAAAAAATTTA
TATTAATGATTGTTTCCTTTAGTAATTTATTGTTCTGTACTGATATTTAAATAAAGAGTTCTATTTCCCAAAAAA
AAAAAAAAAAAA

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FIGURE 1450

MAAAAATKILLCLPLLLLLSGWSRAGRADPHSLCYDITVIPKFRPGPRWCAVQGQVDEKTFLLHYDCGNKTVTPVS
PLGKKLNVTTAWKAQNPVLREVVDILTEQLRDIQLENYTPKEPTLQARMSCEQKAEGHSSGSWQFSFDGQIFLL
FDSEKRMWTTVHPGARKMKEKWENDKVVAMSFHYFSMGDCIGWLEDFLMGMDSTLEPSAGAPLAMSSGTTQLRAT
ATTLILCCLLIILPCFILPGI

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FIGURE 1451

CTGGGGTTGGCAGTCTGCTTAACAAGAXGCTGGGACCACCTCTGAATTAGTGAATCAGGGAGCTGCTGTGTGATC
CCCTCCTCCAGGCTTTCTTGGAGTTTGTCTCTGCCACTTCCTCAAGCCCTTTAAAAAGGCTCCTGTGCTTTAGAG
AGTWAGGATGTTAATGACCGTTCTTTTTTCTTGTACTTTATTAAGTACTAGTCTTACTAGACTAGTGCTTAAGTG
GCAGTGTCTGCCTTTGCCTTCTCCCATCTCTTTATGCTCCTTTCTTCCAACCTTCTCACGTTTCTGTTTCTCGCAC
GGCCAGGTGTCCAGCATCCCATGCTGACTTGCGGTTGGCCAATCCCCCCTCGTAGATTTCCTCCACATTTTCCT
CTTCCTCCTTTTCCTGTGGGAAGTTCTTTTTCTGGGCTGTGGCTGGTCTTACGTAGTTCGGTGGAAAAAGTATTG
AGGTAGTGTTAGATACTGTGCTGCACCTCCAGGAGTGTCGAATCTTTTGGCTTCCCTGGGCCACACTGGAACAAG
AAGAACTGTCTTGGGCCACACGTAAAATACACGGACACTAACGATAGCTGATGAGCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1452

AACAATGGATATTCTGTAAATATCCTGTACAAAACAAGACTATTGCCAGTAATGTATACAAATTGTCTTTTTGT
GTACTTCCAGCATAGGTTTGGATATATGAACATTTTTCTTTTATTGTTTTATCTTCACAGAAAATAAAAGGTGTT
AATTTGCTTTTTTAAACAAATTTAATTATCACATTTTAAATTACTTTGTGGACTGTGTTTTCAAACCTTTGCAAA
TTCATCTGTTACACAGAAAATTTTGA CTTAAACATCTGCTGAATTCCAAATTTCTGTAATAGCTACTGTATCTG
TGATAAACTTTTCCTATATCTTTTCCTTGCCATTTCTATGGATTTTATAATGAAAGAAAAAGGCATTGGAGACTGAA
GGCAGAAATGGTTGTGACAGTGCTGTTTGGCTTTTTTCATTCTTCAAATGCCAAGTCATCCACTTTGTTTTCTGT
TTAGGCTTTGCACAAATACAATTGCTTTTCAGGAATCCTAAAGCAGCATTTTATTGAGTTTGAATTATTAAAGGTA
CAGAGGAAATGTGGTGATGTAGA ACTTTTCTTAACACAGGTATCTAGGAAGTAAGTGCTGAGTTGATTTTCTAGG
TTCTTACGTATTTGAAAAATAAAATTGCAATTCGAGATAAGTGCTTGAGCACTCTACTTAAGTATTCTCTGTGTT
TTATGAAGAGAAAATGATCTGATTTTCCCTTATACTTCAATTTACAATACATATTCCCTTTTAACTTAAAAAAAT
TGTAATGTGGGAGAAAAAACCTGCAGGATGGAAACAATTATTAAGAATGTAGATCAATAAGTACTTTTTAGTG
ATGTGGCAGAAATCCCTGTTGATTCTAAGTTTTAGAGTGCTTTTCCCCTATTTCTGACCTACAACATAAACTA
CTCTCTATTAGGAGAACTAGACCACTTTCTTCATTCTTTTCTAAACTGCTGCAGATTGCCGTGAACCTCTATCAAT
AGTCTCTTTTCCGCAGGCAAAGTGGCATTTTCTAAACATGTTTGCTTACTGCCAGGTGGTTTGAAATCTATGATT
TACTGCAGTAGTATGTGCTTAAACAACTGTTGAGGTCTTTTAAGCAGGAAAGTTCAAAGGAAGTGTCTTGATA
ATGGTACTGGTTTTTCTACAAATATTAAGTAGTCATTAGAAGTTTGCAACCACCACCAAGTCTGAGAGAACTCTGG
GATATTCTGTGGGTTTGGCATATTAGATAGAGAAAATGACAGATCTAGATGAAGGGAGCTTTTGATGTGTGCCT
TTAAAACTGATTATGTATAAATACTGATATTTACATACGGAGATATTTGAAGACCCAAGTCTGCCTTTACAG
AGCCCTCCATTCCAAGTTTAGTTTTTGTCAAAATATGAATCATTTTATTTGACTGTACTATCAGTACACAAATGC
ATGAGTATGTTTATACAGTGTTAGACTGATGTGAATTTGCATTGTTTACATTACATTGCCAGCGCATATCATTTA
GCAAGTTGGCATTAAACATTTATGCTTTAATTAAATGCCAGTATACCTATGTGTGCAGCAGTAAAAAATTAGTGAG
AAAAAGCAACTTTTTGTCACTCTTAGGAAATATTTGTCTTATTAGTGTTCTTGGCACATGTATATTACTAAAGT
AGATAATTCCAATGAGAAATACTACCAGATTATTGTTATAAAATTAATTTACAATGTCCCTGATATTGAGCTAAC
TCTTAAAAAAACCAAACAAACTCGTATCTGAGTGTA ACTTTGCCAATATTTTAAAAGCCAAATATTCTCTGGA
CAACAAATTTGTATTGCTCAGGGACAGTTTACCTTGCTTGGTAAACCTTCCCAAACAGAAATATAGCTATACTAT
CTTTGGTTTTGT

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FIGURE 1453

MWQKSLILSFRVSFPLFLTYNYKLLSIRRTPLSSFFSKLLQIAVNSINSLFSAGKVAFSKHVCLLPGGLKSMI
YCSSMCLKQLLRSESKGSVLIMVLVFLQI

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FIGURE 1454

GAGAGCCAGAGGCCACTCTTTATTGCTTTTTTCTCAGGCTTCTGCTTGTGTGATCAGGGNAAGGGATCCCACAT
ATGGGAATGGTTAGTGGCTTTTGGGACTCTCCAGGAGCCTCTGTTTTAAGAATGAGGCCAAATGTGCAGGCTCAG
GCCAAGCGGCAGAGATGAATGAGGTGATGACCACAGCCTTGATCCGGCAGGAGCTCAGAGATGCCCGGGAAGACG
GGGGGCCCCGAACGGAAGCAGAAAAACACTTATGGCCGCTGGGAAGTTGGGAGAGCGAGGCTGGGGCTCTGGCAGG
CCCAGGGAAAAGTTCCTGTCTAGGCTCTTTATTAAAAAATTTAAAAGGAGGAGTTGAGGCACCTTGAATATTCTT
TCGCGAGTCTTGGAGACTAGCCGATTTTTCTATGAAGCAAGCAAAGACCGCGGTCCCGGATCCTGCAACTTCTACC
TCATTTTCTCCAGGCCTCTCCACTTGCCCGAGCTCTCAGCCACCAGGAGACAGATGGAAGGGGCTTCTGGATTGC
GTTGGGAGCGGGCACTGTCCCCTACCCACTCCTGCTCAGTTTCCCAAAGTCCAGCGACTTCCGACCCTCCTTGGG
GGGAAAAATACCAGTACCCAGACACCTTTGCACCCTGTTATATTGACTGGGCTTGCTTCAGGAATATCTTACAAAG
AAAAGAAGAAGAAAGAACGGCTTGGAGTCATGTTTACATCTAGTTCTACTGATCCGTTACATCTGGAGAGTTTA
TTTATAACTCCCTCTATAACTCTCTGTTTGGAGACACTGTGGCTCTATTGACAGACTGATATCTAGGAAATATTG
CTCTATGTCTAACCGTACCTAAATGTGCTGTGGTTGTATTTACAGATTTATGTTTGGGGAAATATAACTATTTT
CATTGTATTTGTGCATATACAGTAGTTATAGGAGCAGATTTATATATGGGAAATATACGACTCTCTTACAGCCA
TCCAGCTTTATGTACATTTGATATCCTGACAGATTTATATCTCTGAACAGCTATATTGATCAAAACGTATATTGT
TAGAATTATGTGTCCGAAGATTTTTTCTTATT

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FIGURE 1455

MKQAKTAVPDPATSTSFSPGLSTCPSSQPPGDRWKGLLDCVSGHCLPPTPAQFPKVQRLPTLLGGKNTSTQTPL
HPVI

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FIGURE 1456

CTGCGCCTGGCGTCACCGACCGGTGCGGACAGGAAGAGGCTCTGGGCTGGCACATGTGTATGGCGGTGAGGCGGG
CGGGTACATGGCGGGCTCTGTGGGACTGGCGTTGTGCGGGCAGACGTTGGTGGTGCGGGGCGGCAGCCGATTCCCT
GGCCACCTCCATAGCAAGCAGTGATGATGACAGCCTCTTCATCTATGACTGCAGTGCTGCAGAAAAGAAGTCACA
AGAAAATAAAGGGGAGGACGCGCCCTTGGAACAGGGGAGCGGTGCGATTCTGGCGTCCACCTTCTCCAAGTCTGG
CAGCTATTTTGCTTTAACCGATGACAGTAAGCGTCTGATTCTTTTCCGTACAAAACCATGGCAATGTCTGAGTGT
CAGGACCGTGGCAAGGAGGTGTACAGCCCTGACTTTTCATAGCCTCGGAGGAGAAGGTCTTGGTGGCCGACAAGTC
TGGAGACGTCTACTCCTTTTCGGTGCTGGAGCCACACGGGTGTGGCCGTCTAGAGCTGGGGCACCTGTCTATGCT
GTTAGATGTGGCTGTGAGTCCTGATGACCGCTTCATCCTCACTGCCGACCGGGACGAGAAGATCCGAGTCAGCTG
GGCCGCGGCGCCCCATAGCATCGAGTCCTTCTGCTTGGGGCACACAGAGTTTGTGAGCCGTATCTCCGTGGTGCC
AACTCAGCCCCGGGCTGCTTCTGTCTCCTCTGCGGACGGCACCCCTGAGGCTCTGGGAGTACAGGAGCGGCCGCCA
GCTGCACTGCTGTACCTGGCCAGTCTGCAGGAGCTGGTGGACCCCCAGGCCCCCAGAAGTTTGCCGCGTCCAG
GATTGCATTCTGGTGCCAGGAGAACTGCGTGGCGCTCCTGTGCGACGGCACTCCTGTGGTCTACATCTTCCAGCT
GGACGCCCCGAGACAGCAGTTGGTGTACAGGCAGCAGCTGGCGTTCCAGCACCAAGTGTGGGACGTGGCTTTTGA
GGAGACCCAGGGGCTGTGGGTGCTCCAGGACTGCCAGGAAGCCCCCTGGTGCTCTACAGGCCTGTGGGCGACCA
GTGGCAGTCTGTTCTGAGAGCACCGTGTTAAAGAAAGTCTCTGGTGTTCTTCGTGGGAAGTGGGCCATGCTGGA
AGGCTCTGCCGGCGCAGACGCCAGCTTCAGCAGTCTCTACAAGGCCACGTTTCGACAACGTGACCTCCTACCTGAA
GAAGAAAGAGGAGAGACTGCAGCAGCAGCTAGAGAAGAAGCAGCGCGCCGGAGTCCCCCGCCTGGGCCCCGACGG
GCATGCCAAGAAGATGAGACCGGGGGAGGCGACGCTAAGTTGCTTGATCGTGGCGGTCTGTTTCTGTGCGACTGTGG
ACCACTTATGTGCGATCCGTGGACCACTTGCGTGCGATCTGTGCGCCGACGATGAGCTTGTTTCGGATGTAGCTCC
ATCGTAAGTCGAGGAGCATCTGTGATTTGTCCTCTGCTTATGGGATATGTTTTTCCGCTACTGAGTCTGTGTAGT
AAATTTTTGACTAGGAA

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FIGURE 1457

MAGSVGLALCGQTLVVRGGSRFLATSIASSDDDSLFIYDCSAAEKKSQENKGEDAPLDQSGAILASTFSKSGSY
FALTDDSKRLILFRTKWPQCLSVRTVARRCTALTFIASEEKVLVADKSGDVYSFSVLEPHGCGRLELGHLSMLLD
VAVSPDDRFILTADRDEKIRVSWAAAPHSIESFCLGHTFVSRI SVVPTQPGLLLSSSGDGT LRLWEYRSGRQLH
CCHLASLQELVDPQAPQKFAASRIAFWCQENCVALLCDGTPVVYIFQLDARRQQLVYRQQLAFQH QVWDVAFEET
QGLWVLQDCQEAPLVLYRPVGDQWQSVPESTVLKKVSGVLRGNWAMLEGSAGADASFSSLYKATFDNVT SYLKKK
EERLQQQLEKKQRRRSPPPGPDGHAKKMRPGEATLSC

GCTGACACCTGCCCAGTGGGAAGCTGGCATCCCTCCCTTTGTGGGTTTCAGAGCTGCAAGAAGCACCAGGCTCGGCC
 ACTTCAGAAGCCCCAGCCTCGACCTAGCCCACCTCTCAGGGCCACAGTGCAGAAAGCCTGCACACCTGCCAAGTC
 TCTCCGACTCCTTGCAGCTGCTGTGACGATGCCCCAGGCTCCTGCTGACCCGGGCAGAGAAAGGCCACCTTGAACA
 AAGAATCCTGCAGGTGCTGACAGAGGCTGGCTCCCCGGTGAAACTTGGCCAGCTGGTGAAGGAATGCCAAGCACC
 CAAGAGGGAGCTCAACCAAGTCTCTACCGAATGAAAAAGGAGTTGAAAGTCTCCCTCACATCCCCTGCCACCTG
 GTGCTTGGGCGGGACTGATCCTGAAGGCGAGGGTCTTCGACAGCTGGCCTTGTCCAGCCCTGCCGAGAGGCCCCA
 GCAACATGCAGCTACAATTCAGAGACCCCTGGCCCTCAGTTCAGCCAACAACGGGAGGAAGACATCTACAGGTT
 TCTCAAAGACAATGGTCCCCAGAGGGCCCTGGTCAATCGCCCAAGCACTGGGAATGAGGACAGCAAAAGATGTGAA
 CCGAGACTTGTACAGGATGAAGAGCAGGCACCTTCTGGACATGGATGAGCAGTCCAAAGCATGGACGATTTACCG
 CCCAGAAGATTCTGGAAGAAGAGCAAAAGTCAGCCTCAATTATTTACCAGCACAAATCCAATCAACATGATCTGCCA
 GAATGGACCCAACAGCTGGATTTCATTGCAAACTCCGAAGCCATCCAGATTGGACACGGGAACATCATTACAAG
 ACAGACAGTCTCCAGGGAGGACGGTTCGCCGGTCCACGCCACCTCCCTTCAATGGCACCAGGTGATTCTCTAAC
 TTGGGGGACCCCTAGTTGATCCCTGGGGGGCCCCAGGACATCCACATGGAGCGGTCCATACTGAGACGGGTGCAGCT
 GGGACACAGCAATGAGATGAGGCTCCACGGCGTCCCGTCCGAGGGCCCTGCCACATCCCCCTGGCAGCCCCC
 AGTCTCTGCCACTGCTGCCGGCCCCAGAAAGCTTCGTTTGAAGCAAGAATTCCCAAGTCCAGGAACTCACCCCTGAGGG
 GGAAGCCGCCAGAGAATCCACATGAAATCGTGCTTTCTCGAGGACGCCACCATCGGCAACAGCAACAAAATGTC
 TATCAGCCCAGGGGTGGCTGGCCCAGGAGGAGTCGACGGGTCTGGAGAGGGGGAGCCAGGGGAGGACGCAGGTCTG
 TCGTCCCGCAGACACACAATCCAGAAGTCACITTTCCCTCGAGACATTGGTCAGCCCATCACTCCAGCCACTCGAA
 GCTCACCCCCAAGCTGGAAGCTATGACTCTTGGAACAGGAGTCACAAAGCTGCAGAAGGCAGCCACTATGTGGA
 TGAAGCCTCACACGAGGGGAGCTGGTGGGGAGGTGGGATTTAGTGCACAGCCTCACGTGGGGCTTGGACACAGG
 TGGGGGTGGGCGCATGCTAGGGAGACTAGCCTGCTGCTCTCTGCATTCTTAGCGTCTTGTTTGACCTGCTTGCT
 TCCAGACATAACCTGCATGAATCAGTTTTGGGGGAATGGACCTGGCATGGGGATGGGTTTCAGGCCAGGTCTTTTG
 ATGGCCAGGAGTAGATGACAGGGAGTTGCCTTGGGGAACTTTGGTGTGCCAAGAGGAGGTGGGTAGATGGGAGT
 GGGGCTCGGTCCCCCAGGCCCAGGGGACTCTCTCCACTCTTTCTGGGCTCGGGGCATCTGCCTGGAGTTACCTT
 CCATCATGGCTACCTGCTGTGGTTTGAATGTTTGAGTCCCAACAAAAATTTCATATCAAAACATAATCCCAACTGGG
 TGCAGTGGCTCACGCCTGTAATCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCAATAGGTGAGGAAATCCAGA
 CCGTCTGGCTAACATGGTGAAACCCCGTCTCTACTAAAAAAAAAAAAATACAAAAAATTAGCCGGGCGTTGTGGCG
 GGCACCTGGAGTCCAGCTACTCCGGAGGCTGAGGGAGGAGAAATGGTGTGAACCCGGGAGGTGGAGCTTCCAGTG
 AGCCGAGATCGCGCCACTGCACTCCAGGCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAAATAAATACATAAAAT
 AAAAAATAAACCAACCCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1459

MAQAPADPGREGHLEQRILQVLTEAGSPVKLAQLVKECQAPKRELNQVLYRMKKELKVSLTSPATWCLGGTDPEG
EGPAELALSSPAERPQQHAATIPETPGPQFSQQREEDIYRFLKDNGPQRALVIAQALGMRTAKDVNRDLYRMKSR
HLLDMDEQSKAWTIYRPEDSGRRAKSASIIYQHNPINMICQNGPNSWISIANSEAIQIGHGNIITRQTVSREDGS
AGPRHLPSMAPGDSSTWGTILVDPWGPQDIHMERSILRRVQLGHSNEMRLHGVPSEGPAPHIPPGSPPVSATAAGPE
ASFEARIPSPGTHPEGEAAQRIHMKSCFLEDATIGNSNKMSISPGVAGPGGVAGSGEGEPGEDAGRPPADTQSRS
HFPRDIGQPITPSHKLTPKLETMTLGNRSHKAAEGSHYVDEASHEGSWWGGGI

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FIGURE 1460

GCAGAAATCAATATGTGCACAGTTCTCTTTATCAGGCAAAAACACGTTTATTGAGACATGAAATGAGAATCAGGCT
GAAGGAATCATGCAGCTGAAGAGATGATTATATTCATAGAAATGAAGAGATGAAATATTCAAAGAAGATGGCTACT
TTATTGTGAGACTTACCACTTTAACCTCATATGTTAACAGCACCTACCAAAAAATGATATGAGATAGAGCTAAAA
TACTGAAATTGCAAATGGACAAAATAAATCATGAAAATTTGTTTATTATTTCTTCAATAAATATTTCTAGGTGCT
TTGTGATTCTTTCATTTAGTCATTAAAGCCATTGCTTTACTATATTGCGTTGCCACTTTAAAAACAAGTTACTTG
ACATTGTTTTTGACAGATTTCACTATATTCTTATGTAATTAATTGATTATTTCTAAAATGTTTGAATAAACTTTG
TACTCCCTCTAAGGAGTATTTTATTCATTCTTTTAATTCCCAAATGAACTTTGAACTTACAGTGCTGTTGAATGC
CTTGGTAAGGACTTCTTGAAATTGCATAAACTATTCTTGTAATGGTAAACTTGAGAATTTTCTTTGTTTCTTTT
TTCTCTATGTCTTAAAGAATGCCTTTAGAATCTAATTCATGTTGTATCAGATAAGAATGTTTCTGTGGTTTCTCG
TATCAGATGTGTAAAGAAATTATTACTGGGATGCCATTGGCTATGTCTCTTTCCCTTCATGTAAAAATTCCAAG
TGTCAGTAAACTTCTCTATAATATTTTCTTAAACCATTATATAAATTTGTGTTATAATACTCCAGAAAAATCAAT
GTAATAAGTGGTCATATATATCACCAACTATGGATATCAAAAAGTTGGGGTCACATCAGTGCTATTTATTTAATT
AAAATACATTGCATATTTCTATTAGCACAACTTCTCTCTAAAAGGTCTGTGTAAGTCTTCTCATCATTATTTG
ATTGCTGTTATGGGATCCTGTCAAACTGTGTAATTGTTTATTCTCCATTCCTCAAATACAAAATTGAGTAGGTT
G

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FIGURE 1461

QNQYVHSSLYQAKTRLRLHEMRIRLKESCS

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FIGURE 1462

TCATTTTAAAGAGACTCCTGCTATGTTGCACAGACTTGTGAATTCCTGGTTTCAAGTTATCTTCCCCCTATGT
CACTCAAGTAATGTGGACTACACTCATGTGACACCATGCCCATCTTTATGTTGTGTATCTTATTTTGTGTTTGT
TACTCTTGAATCAGCTCAGTCTGAAAATCTGTCTTTTAATTCATGGGGATTTTTAGAAATGATTCTTGAGGG
TTTGTCCTTTGAATGTGTGGTCCCTTCTCTGCCTAGAACTTTTTTTTTGAATTGAGAC

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FIGURE 1463

MPIFMLCILFLFCFTLESAQSENLSFNWSWGFFRMISWRVLSFECVVPSLPRTFFFE

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FIGURE 1464

TGCCTGGCCTGACATTTTTANAAAAAGTTTTATTTTGCACGGCTCTAAACCTCCATGTTATTTTCCAGTGGTGTA
GAAGGTACCAGCTAAAGTGAACCACTATGTAATATTAGGCCATTCTAAAGGAAAGATGTTCCATGTCATCAGAGA
TGGTAAAATAGGCAGGGGAAAAAAAATCTTTGGTACCAAAGATTACACTTGTGTTTCTACACAGCAAACCATTTT
TCTTTCATGAAAAATAATATATTATTAACATGAATATATTATTTTGTCTATTAATGTGAAAGTTGTCTCTAAATATT
TTTTAATTTTCAAACCTCATACTTTATTTTTCATTTGAAATGTTTTTTCACACCTTTTGCATTACATAATAATTTTGT
GGAAGCATTTTGGCCCTTTAGAATAAATATTAGATTGATATAGCTGAAATGTGACTTCCAGTTCTTTGATATTCCC
CTTGTTATTCAAATAGAAATATGGAAATGCTTTATATATTACTGTTAAATTTCTTAGTGCAGAAATAACATTATT
AATAGAGTATTGTTTTCAAACAGATGATTAATTTCAAGAGGTTTAAACAGTGAAATTGTGTCAATATTTTGCATT
TAAATGAATTTAATTGACCGATATTTTCTGTAGTTAAATTTAGTCACAATATCACATATGTTCTTCAAGAAACA
CATGAAATTATTAATAAAGTAATTAATAAATTTTTAATGTATAACAGAATTGACCAATAGGCCAGTTTTCTGGTA
ACTTATGATAGTAGATTGTTTCTTTAGAACTGGGCAGAAGCTCTGCATTCTCACTTGTACTTTGATTTCTTATT
TCTTGGTCAGGCAATTTGAGGAAAGAAGAAATGGCATGGGGAATATATATGTTTGTCTTAGGGAAAACAGTC
TGAGAAATGAATAAAAAGCATGAANNNNNNNNNNNNNNNNNNNNNTACCATGGAAAAGGATATTCACAGTAGTA
CAGTTCTCAATATTTTAAATTAGATGTCATATTTTTTTAATATAGTAAAACCTTGGGATATAGAATATTACATCT
TTTGAGAATGTATGTGTCTCTAAGTAAGTAAAATCTAATGCGTATAGGAGACTGATAGCTAAAAATGAATGGAAC
ATTAATGTACTTTTATAATTAAACCTCTTATCTATCAGAAATTGTAAGAGAATAGATACATGTTTTGAATGTAAA
GTTGAAAAGTCTGGTTTACTGAATAAATTGAAAGTGATTTATAAAATCTAAATTTGGACTACTTGCAAATGATAA
GCTATTCTAGTAGCCTTTAGTTTAAATCCAACAGAAATCTAGAAGTCACAAGCAAATATCTTAAAGGTAAAATCC
ATCTGGGCACCTCATTTAAAGTATATCTTAAAAAAGCAGCAGCAAGGTACCTTGCCATTTTGTAGCATATTTTCTTC
CTTTTTCTTTTTCTTT

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FIGURE 1465

PGLTFLXKVLFTALNLHVIFQWCRRYQLK

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FIGURE 1466

GACTTTGTAACCTGATTTTCAGAGAAGCGATTAAGGAATTGTACTGTCTTTAAACAATATTTAGAATGCTTCAGTA
AAAGCATTTTTTAAAAAATTTTTCTAATGATGTTAGTAAATGTACCTAATATAAAGTTAAGTGGTTTTATTTAATAC
TTTTCACCTGACCATGATTATGTTATAAATAAGAGGATTTATAGTTTGCATGCCTGATATAATCTATTTAATTTT
CTTTACAAAATTTTTGTACATGAAAGATAAATGTCTTCATTTTACCAGCTACCTCCTTCCAGATTGAATGCTTCA
GTGCACTTTGATTTTCAAATTGGCTATTATTTTTTAATGTAATTAACCTTCACAATTTAAATTGAAGGATATTCT
GATCCTTAGGTTATAAATATGTGACTTGATGGTTTATGTAACATTCAAGTAGCATGTTTTCTATAACAATATGAT
AAAAGTTTTGATACATACCTTGTATGTTGCTTGACAGATCTGTTTTAGAAAACATTCTCTGCCTTTTGAAATGA
AGCCATGTATTTGAAATTATTTCCCAAACAATTATATCTTAAGCGTGTGCTACATAGTAATCATAGTCATTTTAA
TTTAGATTATAAAGCTATATTTTAACTTTGAGGTTTGTGAATTTCTTAGACATATTAATGACTTTATAGTTAAT
GGTGCTCTCAGATTTTATTTTTTAAGTTAAAAATTTGCCAGGCGCGGTGGCTCA

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FIGURE 1467

LCKLISEKRLRNCTVFKQYLECFSKSIFKKFF

[illegible]

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FIGURE 1469

FPFFLNQRQSISDFMNVCHCA

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FIGURE 1470

GTTTTCAAAGGCACTCTGTTAGGTGGCATAACAGCCCTGATTAAAAACAGCACTGAACTTAGACATGTTTCATTTT
TTTCTCTAACCTAGTACCTTTTTTACAGATTGCATATTAACAGCTTATTTTTGCATTACCTCTGTAAACCCTCA
ATCAAAATTTATTTAAAAATATTGGGAGCTTTTAGTTTAAAGTGATACCTACTGGCCCCCTCAAAACATCCAGCATT
AAAAAATAAGACTGGCAGTGAAATAATTATCAAAATTATAGGAAGAATTTTCATTTAGCCAGAACTGAATTGAA
AAATCCATTTGGT

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FIGURE 1471

FQRHSVRWHTALIKNSTELRHVSFFSLT

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FIGURE 1472

ATGCTTCTTCCCCAAGGCAGCATCAAATTTTGAATTAATTTTTTGCTGCTTAATAAGGACTTAAACTGGTACCCAA
GTCAGAAAGACTCTGCCTCTAATTTTCTGGGGCTTGGGGATGAAGATAAAGTGTTACACCCAGTGTTTGTCCACC
ACAGTCTGTGGGGCAGAGAGACCCCTTCTGGGACTGAATTCTCAATTTGAAGCACTGTTGTTCAAAGATCTCCCT
TCTGGGTCTGACAAGAAGAAACATAACCCTTATTTATTGCATTCTTCTGGCTTACATACATTGCCCTCACTAATC
AATGGACATTTCAGCATTTTCACTACTAATTTTGAGAGAAGGCCACCATGGAATTTAAATAAAAAATATTATTGAAGA
GAATTGCCATCATTCTCCATTTTCCCTGAACTACCACAAGCTTCTCAGAATTTTAGACAAATGTTTTTCCCCTCA
GAACTGAGCATCAGTGCTGCTTTGGAAAAACATTCCATGTGAATACTGTGGTTTCAGTGTCAGGACCTGTACTTG
GGCAGTTGGCAAGAGAGTGTGCCAGTTTTTTATTGGGAGATGGGAACACCCAATTTAATTGATGCAATTAGGTTG
TAGGTTTTTTACAGTTTTTCTTTCTTTTCTTTTCTTTTCTTTTCT

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FIGURE 1473

MKIKCYTQCLSTTVCGAERPFLGLNSQFEALLFKDLPSGSDKKKHNPYLLHSSGLHTLPSLINGHFSISLLILRE
GHHGI

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FIGURE 1474

GCTCATGTCTAGGCTGAGAGTGAGATAGGAGCCACTGGAAGAATGAGATGATTCAGACAAGAGATTGTAGGAGAT
TGGCTTATTCTGTTGACAAGATGGTAATCCGACTTATTTTTTGGTTTTTTGGTGTTGGTGGTTTAGGAAGACAGG
AACTTCTCCACACCCGGTAGAGTTCAGCTGCCTTTTCATTAGTCAGCAAGCAGTTTTTCCTTTCTCAAGGCAGTC
CACATCCAGCAAAACATTTGATTAACTGGAAAGCAATACCATTCTCATGCCAGTGTACAAATTACATGAAAGAGC
ATCATTTTTCTAGTGTCTGAGGATTGGCTGCTTATGGCCAATTTTGGCAGCAAAACGATAGGATTAAAAATAGCT
TGAAGATGATCTAGTCTTAAATAATATATTTTCATGATGAACTTTCCTTGGGAAAGTGCATCTTTCTGCCTACAAG
AATCACATGACCCCTTTCAATAATTTATGTAGTAGAGAAAAACACACTATTTCTCATAGAGTTTTTCAGTCATGTG
CTGTGGTGTGATTGTTTCTGGACATTCATAAAATTTTATAGTTAACTGAGTTCTCTTTTCTGTTTTGTTGCTATT
TAACGTCCATTGAAAACATGGCTTTCTTTTGCGCATTCTGTTACTTTTCAGCTGTACTTTCTAATAAGAATGGATT
GCCCTTTTGTAGCAATCTTTGATTGAACTGGTACATTTTCAGATTACTTAAATGTCATCAGGCCACACAGCATACCA
GGTAACAGAAAGCCATAAATTAATAAATAAAAAAAGGCAAGC

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FIGURE 1475

MSSGHTAYQVTESHKLKIKKRQ

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FIGURE 1476

AGTTAAGTAAATCACCCCAATTTTTCTAATATTTAAGTGAACATTTAAAGATAAGCATTTCCTTAATGTTAATT
CTTTTCTTTCATGTAATCTTGTCAGTAGACAAATGATGGTGACTATATTCTGTAATAAGTACATATATTATGATT
AAAAAAAAAAGCGTGTAATCTGCCCCAAAGAGATCATAAGCACTTTGGAGCTATAAACTTCTTGCTATTTCTA
CTTCATGGTACTGATATTCTCTTCTCAGATAACCAAACAAAAACAGCTGAATAAAATCAACCATTAATAGTAAA
A

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FIGURE 1477

MLISFLSCNLVSRQMMVTIFCNKYIYYD